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The Health Magazine of the American Medical Association

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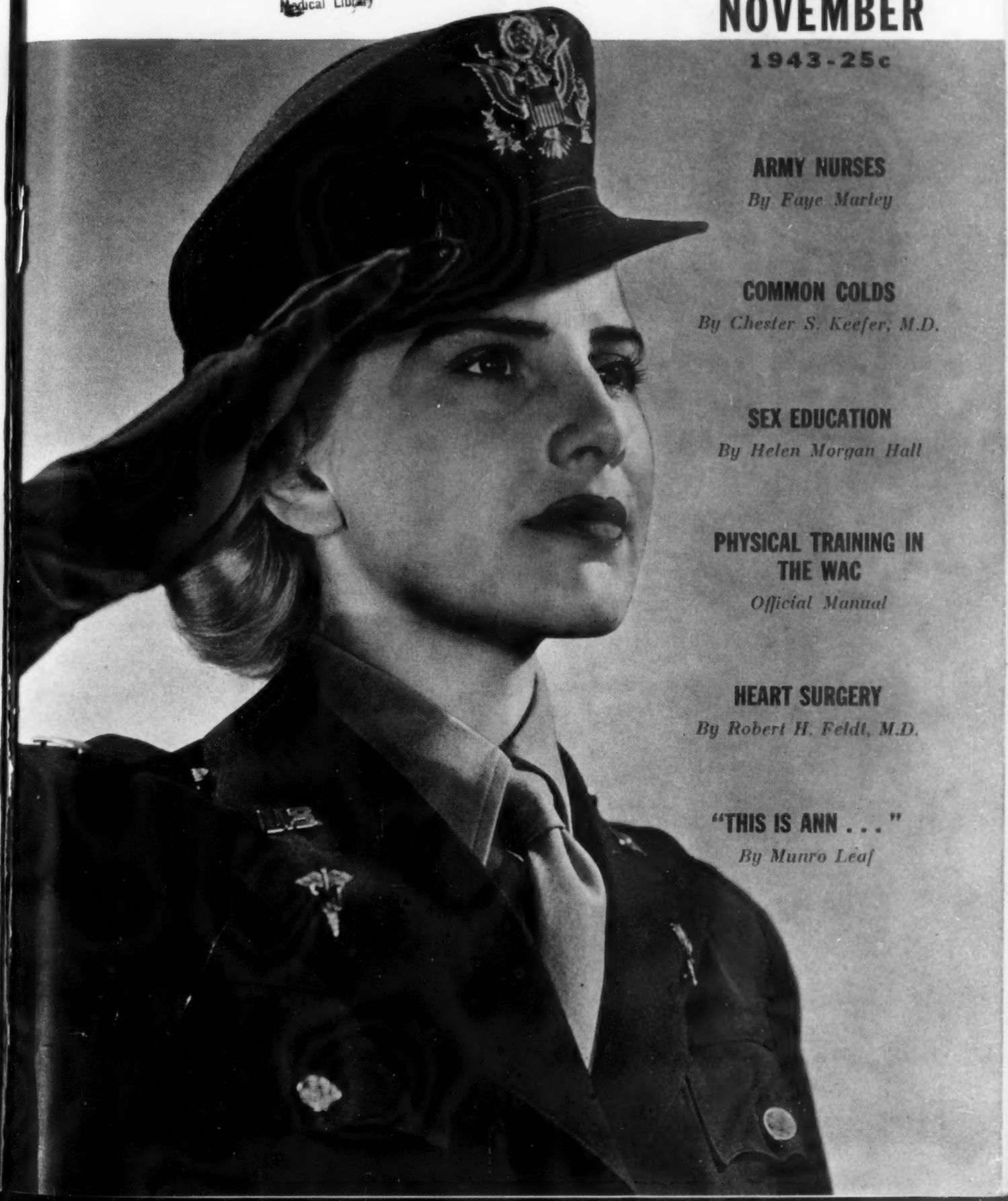


ARMY NURSES
By Faye Marley

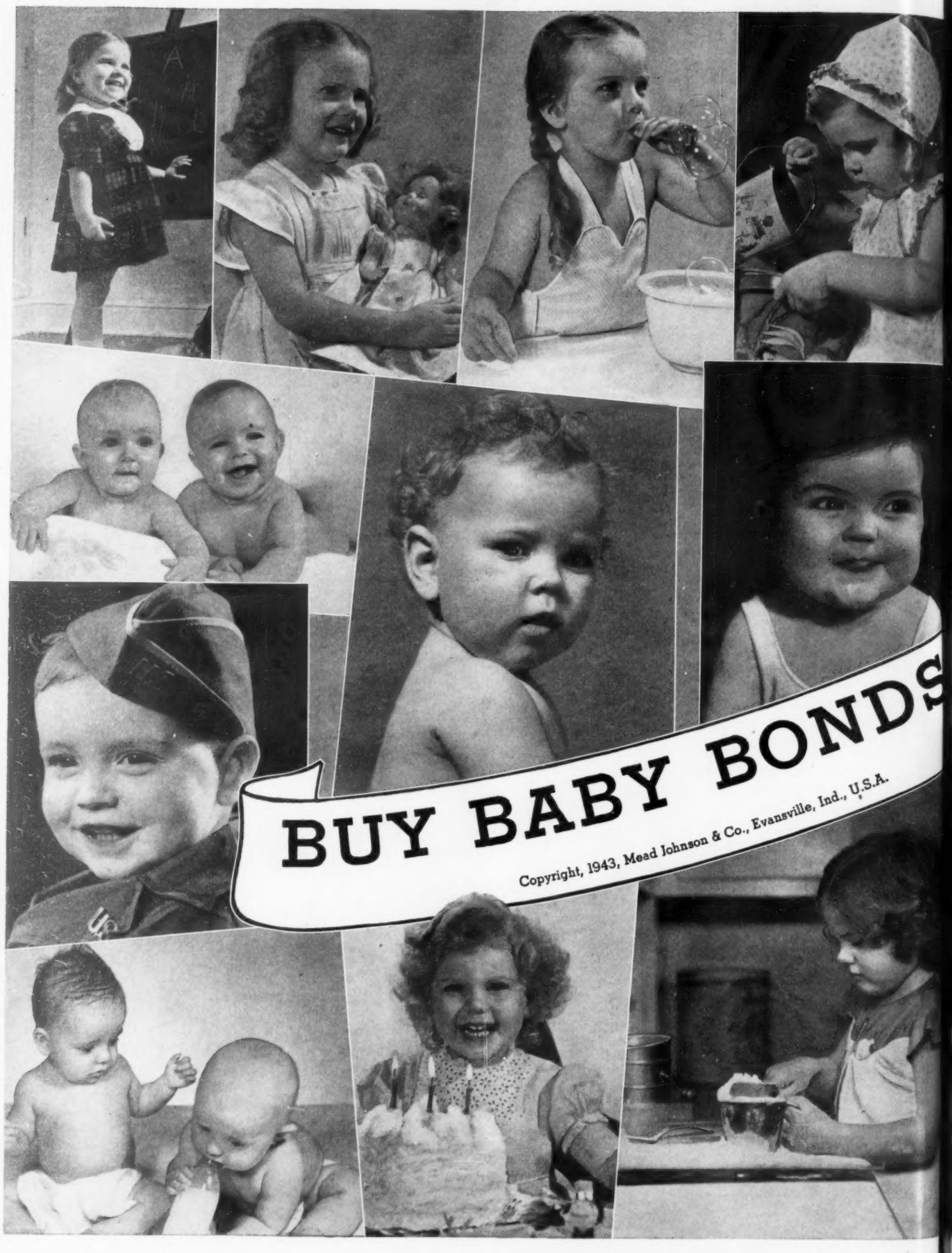
COMMON COLDS
By Chester S. Keefer, M.D.

SEX EDUCATION
By Helen Morgan Hall

PHYSICAL TRAINING IN THE WAC
Official Manual

HEART SURGERY
By Robert H. Feldt, M.D.

"THIS IS ANN . . ."
By Munro Leaf


BUY BABY BONDS
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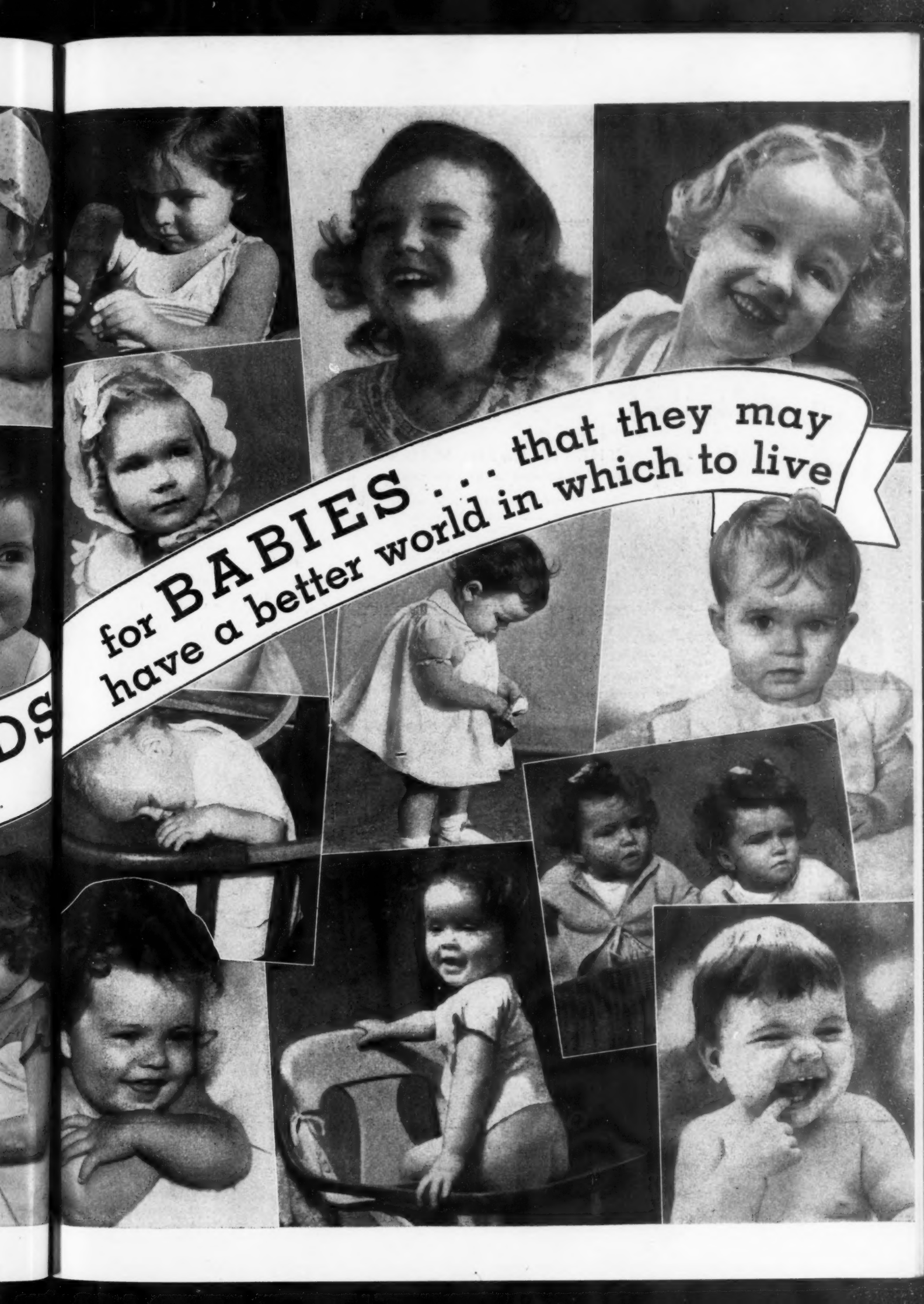
for BABIES . . . that they may
have a better world in which to live

PAUL EHRLICH 1854-1915

Discovered the cure for syphilis

hygeia

THE HEALTH MAGAZINE

535 N. DEARBORN ST., CHICAGO 10, ILL.

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NOVEMBER

COVER ..... J. C. Redlich Studios

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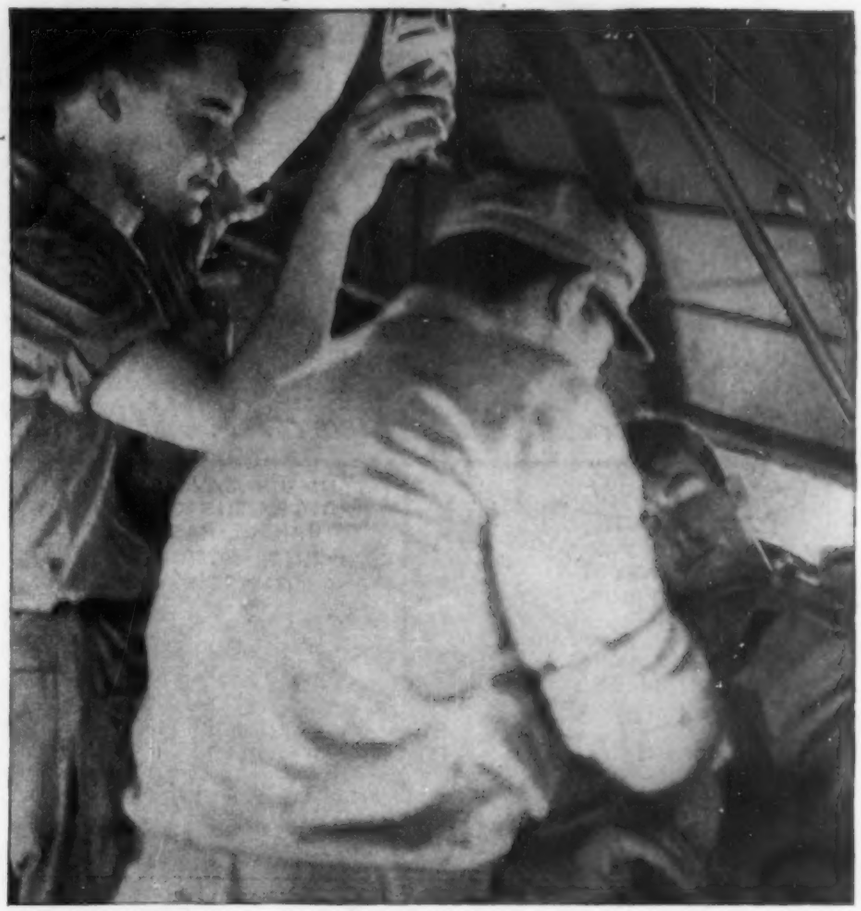
MIRACLES OF THE BATTLEFRONT

TRANSFUSION IN A FLYING AMBULANCE



OFFICIAL U. S. NAVY PHOTOGRAPH

It's 37 to one you won't die if wounded in Navy action. That's the present remarkable record of Navy medical men and Navy methods in this war.

Last war, one in 14 wounded died—but that was before "blood banks," before sulfa drugs, before morphine "Syrettes."

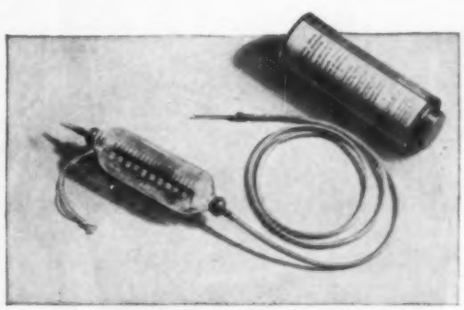
Now Navy medical men have these aids with them even in the thick of the battle, thus gaining precious minutes in caring for men where they fall.

Flying the wounded back to hospital base is new in this war. Doctors aboard often have patients on the road to recovery even before they reach some hospital haven, far from the war zone. Medical men—both Navy and Army—are constantly finding new ways to bring our sons back alive, giving our soldiers and sailors greater medical protection than in any other war in history.

Transfusions need no hospital. Navy doctors and hospital corpsmen administer plasma on planes, on ship decks, on beaches—even drop transfusion kits by parachutes to men on rafts adrift at sea awaiting rescue. Newer than plasma is *Human Serum Albumin*, made from the blood you donate. Less bulky, easier to ship and use, this new product is responsible for marvelous recoveries from shock of burns and wounds.

OFFICIAL U. S. NAVY PHOTOGRAPH

A U. S. Navy Flying Ambulance brings casualties from the front to a Naval hospital center in the South Pacific. At such hospitals, equipped with every device known to medical science, wounded Marines and Navy men are nursed back to health under the care of specialists.



HUMAN SERUM ALBUMIN, new treatment for shock of wounds and burns, is being produced in large quantities by Squibb for the Navy and the Army . . . Scores of drugs and biologicals are on the fighting fronts, from ether and morphine Syrettes* to fever-fighting quinine sulphate and sulfa drugs.

From the lessons of this war, Squibb will help America's medical men to build a healthier peacetime world.

*Reg. U. S. Pat. Off.

E·R·SQUIBB & SONS

ARMY E NAVY

Manufacturing Chemists to the Medical Profession Since 1858

THE PRICELESS INGREDIENT OF EVERY PRODUCT IS THE HONOR AND INTEGRITY OF ITS MAKER

WHO'S WHO IN hygeia

Unlike his most famous creation, Ferdinand the Bull, MUNRO LEAF is not content to sit under a cork tree and smell flowers. Leaf, whose messages to U. S. moppets include such classics as "Manners Can Be Fun," "Safety Can Be Fun," "The Watchbirds," etc., is now a major in the Technical Information Division of the Army Service Forces, directing his talents toward giving Uncle Sam's fighting men information that may save their lives—in language they'll read and understand. "This Is Ann," reproduced in its entirety starting on page 790 of this issue of HYGEIA, is the first big project Major Leaf has completed as a G. I. oracle. Half a million copies are in preparation now for distribution to Army troops bound for tropical countries; the Navy is also adopting the book for men on ship and shore duty in malarial climates. High ranking officers—Lieut. Gen. Somervell among them—are reported to be enthusiastic about "Ann" and are advocating her introduction as a new kind of "pin-up girl" to U. S. troops everywhere in the tropics.

THEODORE S. GEISEL, a captain in the Special Service Division of the Army, did the illustrations for "This Is Ann." As "Dr. Seuss," Captain Geisel is a well known illustrator and cartoonist in civilian life.

First Officer DONNA I. NILES, as Director of the Well Being Division of the Women's Army Corps, administers the health and welfare of WAC members stationed in all parts of this country and abroad. Medical liaison with the Office of the Surgeon General and setting up and supervising welfare, physical fitness and special service programs for members of the Corps in training and on duty in the field are a few of her many jobs.

She received her AB degree in physical education and biological sciences from St. Olaf College, Northfield, Minn., in 1935. After two years as supervisor of health and physical education in the school system at Carroll, Ia., she enrolled in Teachers College, Columbia University, New York City, from which she received her master's degree in health and physical

"Listen Johnny, even soldiers wear glasses"

WHO SAYS it won't hurt your child to do without glasses—"just a little longer?"

If Johnny can't see as well as others, Johnny can't play as well as others. Johnny loses games, loses playmates, loses marbles—loses *self-confidence!*

If *your* Johnny's eyes are normal—fine! But you can't always take that for granted. In fairness to Johnny, it's better to know! Only a competent eye examination can tell.

Eye care should be early and periodic. More and more teachers and parents regard it as vital *preventive* care. Why not be certain? For Johnny's sake—why not make an appointment *now* for an eye examination?

WHAT ARE SOFT-LITE LENSES?
Soft-Lite Lenses are scientifically designed to control the amount of light that reaches the eye without altering color values. Made by Bausch & Lomb solely for the Soft-Lite Lens Company—they neutralize glare, absorb excess light, protect eyes against eyestrain and fatigue. Soft-Lite Lenses are ground to individual prescriptions. They are prescribed for children as well as adults.

AMERICA NEEDS YOUR EYES—HAVE THEM EXAMINED REGULARLY

There is only one Soft-Lite—identified by this certificate.

Soft-Lite Lenses

SOFT-LITE LENS COMPANY, INC., 745 FIFTH AVENUE, NEW YORK 22

Time to consider

The most important part of your grooming and the keynote for your entire make-up is your complexion. Does your skin reveal all its loveliness and enhance your appearance?

Is your skin sensitive and easily irritated? Then you will want to try Marcelle hypo-allergenic Cosmetics, which are recommended by physicians. Known irritants have either been removed or reduced to a minimum in the production of Marcelle hypo-allergenic Cosmetics. They are carefully formulated cosmetics which are *safe for sensitive skins.*

No need to forego beauty aids just because your skin is tender and sensitive. Marcelle hypo-allergenic Cosmetics may be just what you need. Try them. Send a dime and your name on the coupon below for samples of Marcelle Cleansing Cold Cream, Skin Lubricating Cream, Face Powder, Rouge and Lipstick.

MARCELLE hypo-allergenic COSMETICS
1741 N. Western Ave., Chicago, Ill.
Please send me the five sample beauty aids. I enclose 10c.
Blonde..... Brunette..... Auburn.....
NAME.....H-11-43
ADDRESS.....

education in 1938. Following her graduation from Teachers College and prior to enrolling in the WAC, she was an instructor in corrective physical education at Northwestern University, Evanston, Ill. She also took further graduate work in anatomy and physiology at the University of Wisconsin, Madison, and at Northwestern.

A member of the first group of women to be selected from civilian life to attend WAC Officer Candidate School, she was commissioned a Third Officer (Second Lieutenant) on Aug. 29, 1942. Later she was promoted to the rank of Second Officer (First Lieutenant), and then to First Officer (Captain).

After approximately six months as Director of Physical Training at First WAC Training Center, Fort Des Moines, Ia., she was transferred to WAC Headquarters, Pentagon Building, Washington, D. C., to her present position. At the Fort Des Moines Training Center she started work on the WAC Field Manual of Physical Training, the "bible" of the physical training instructors in the WAC, a part of which is printed on page 782 in this issue.

THURMAN B. RICE, M.D., author of "Learning to Like Milk," on page 809, is State Health Commissioner of Indiana and professor of bacteriology and public health at the University of Indiana medical school in Indianapolis. A graduate of the school which he now serves as a professor, Dr. Rice has been both a teacher and public health officer for many years. During this time, his primary interest has been the interpretation of medical facts and problems for the public. Reading the solution to a difficult problem in Dr. Rice's article in this issue of HYGEIA, many mothers will be grateful that he specializes in this important work.

Other HYGEIA authors this month are: Robert H. Feldt, M.D., Milwaukee, Wis., physician whose articles are appearing in a number of national magazines; Nanette Kramer, Chicago writer who collaborated with Marjorie Lee Joseph on "Baby Business," in the August issue; Helen Morgan Hall, newspaperwoman and free lance writer of New York; and Chester S. Keefer, M.D., professor of medicine at Boston University.

When your doctor advises an operation

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If you should ever need surgical treatment, it will reassure you to know that the operation you are going to have has been performed many times before, and that the surgeon who will perform it commands a wealth of scientific resources in addition to his skill and knowledge.

It will encourage you to know that his abilities include knowing how to make the operation an uneventful and even comfortable experience for you. That he will understand you and that he will give sympathetic attention to your needs to the end that you will be restored to health as soon as possible.

If, therefore, your doctor ever advises an operation for you, you may be sure that his surgical knowledge and skill will make it an experience which you can contemplate calmly and with confidence.

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KALAMAZOO, MICHIGAN

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Mother—

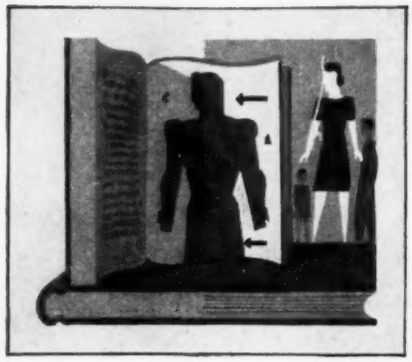
DOES YOUR CHILD SUCK THUMBS? BITE NAILS?

THUM is the effective means to discourage these unhealthful habits. Directions on bottle. Remove from fingers with nail polish remover.

USE THUM
TRADE MARK

EASY TO USE
APPLY LIKE NAIL POLISH
SOLD AT
ALL DRUGSTORES
50¢

THUM contains capsicum 2.34% in a base of acetone, nail polish and isopropyl



NEW BOOKS ON HEALTH

Health Can Be Fun

By Munro Leaf. Cloth. Price, $1.35. Pp. 55. New York and Philadelphia: Frederick A. Stokes Co., 1943.

To a series that has already attracted wide attention, including "Grammar Can Be Fun," "Manners Can Be Fun" and "Safety Can Be Fun," Munro Leaf, widely renowned as the author of Ferdinand the Bull, now contributes "Health Can Be Fun." The book is ideal for little children and makes learning of the simple facts about health most delightful. The type is well chosen, the drawings by Mr. Leaf himself essentially humorous. At a time when health means so much for the nation, this book comes as a most welcome contribution.

M. F.

Education in Wartime and After

By Stanford University School of Education Faculty. Cloth. Price, $3.00. Pp. 465. New York: D. Appleton-Century Company, Inc., 1943.

This book records the group thinking of twenty-nine members of the School of Education Faculty of Stanford University, recognizing that "the educational policies in peacetime may not be appropriate in a nation at war." The unity of thought running through the work indicates a successful resolution of the hazards of multiple authorship.

Reviewing first the problems of a democracy at war, the authors develop the thesis that precollege education must be integrated with the life of the people. "Teaching children their lessons" is even less adequate now than ever before. As against a dull recounting of the past, or a vague preparation for the future, the curriculum must be a part of the community life of today, dealing with problems and aspirations of students, parents, social and political units, and a nation at war. Children in school are not preparing for life. They are a vital part of the life of the day and should be active participants.

Although interested primarily in educational attitudes, specific technics are suggested. For example, students in English assigned to write papers or bulletins on "civilian defense, health and consumer welfare . . . would be meeting a vital need and at the same time be getting practice in expressing themselves on real and immediate problems."

Although stressing wartime adjustments in education, the authors feel that the same attitudes must prevail in peacetime, in which students at all levels must be a vital part of the community and the nation, dealing not with the problems of the arithmetic or history book but with the problems of human beings aspiring to the ideals of democracy and the good life.

Pedantic at times, the book will be of interest to parents, community leaders, teachers and administrators interested primarily in the problems of primary and secondary school education. Higher education is scarcely touched, except in the implications that these educational attitudes may hold for education at any level.

VICTOR JOHNSON, M.D.

Parties in Wartime

By Louise Price Bell. Cloth. Price, $1.50. Pp. 160. New York: Fleming H. Revell Company, 1943.

This includes some twenty-five different ideas for social groups (adult), each with a distinctive wartime theme, such as invitations in the form of draft notices or military orders, games based on the participants' knowledge of Army slang, rationing, and so on. Enough wholesome, economical entertainment is presented to give every reader at least half a dozen usable suggestions. R. M. CUNNINGHAM, JR.

When a lifetime is re-lived . . . many times a day

AFTER A PHARMACIST compounds your doctor's prescription and hands it to you, most of us think only of the valued professional service he has performed.

Few of us realize that each time he fills a prescription he lives his life over again from boyhood on!

Why is this? The pictures and captions explain it.

1 When this pharmacist was a boy in high school, he took elementary chemistry, along with other sciences. Some of the knowledge he acquired at that time he uses today in filling any prescription that comes over his counter.

2 When this pharmacist entered a college of pharmacy, the young man's time was devoted to such subjects as advanced chemistry, botany, toxicology, bacteriology, biology, physiology and pharmacology. This background plays a highly important part in any prescription.

3 Before becoming a licensed pharmacist, the young man had to have actual experience working with a qualified pharmacist. Only after this was he able to take his state examination and become a registered pharmacist on his own. This phase of his training made a vital contribution to his professional knowledge.

4 Finally comes the day when he opens his own pharmacy. Still his studies aren't over. He has to use everything he has learned in the past, and he also has to keep on studying to keep abreast of new drugs and their uses. The prescription he filled just a while ago is actually a re-living of his life story . . . any pharmacist's life story.

SUCH IS THE BACKGROUND of any pharmacist—a lifetime of professional training which he uses every time he fills a prescription. He never says much about it.

But we tell it to you, on the occasion of National Pharmacy Week, to increase your understanding and appreciation of the man behind the drug counter. Because of his professional and educational qualifications, he is worthy of the trust you and your physician put in him.

PARKE, DAVIS & COMPANY
DETROIT, MICHIGAN
Pharmaceuticals • Biologicals
Surgical Dressings

NATIONAL PHARMACY WEEK
November 1st to 7th

Not To Be Sneezed At

In the field of allergy, cosmetics are literally and figuratively not to be sneezed at, because they may be a causative or contributing agent in allergic cases. Yet we venture to say that cosmetics figure less frequently in this field than many common foodstuffs, and certainly no more frequently than many articles of clothing. Many a skin rash that might formerly have been ascribed to cosmetics is now traced to dog dander, house dust, canary feathers, bed linen, etc.

That is why when there is a history of allergy we suggest that patch tests be made with those of our products the subject is using or contemplates using. If they test positive, further testing with their constituents is indicated to determine the offending agents. These found, we frequently can modify our formulas to suit the subject's requirements. The patch test is generally considered best for testing cosmetics because it most closely approximates the conditions under which they are normally used.

While our products are free from so-called common cosmetic allergens, such as orris root and rice starch, we feel it should be made clear that any of their normally innocuous ingredients might be allergenic to the allergic individual. It is our practice to write our patrons a letter to this effect when a history of allergy is involved.

It is our experience that many persons with allergic constitutions cannot tolerate scented cosmetics; therefore we routinely recommend and select unscented products when there is a history or suspicion of allergy. This practice is not to imply or suggest that the subject is sensitized to perfume; it is solely to safeguard against the possibility.

In specific cases of allergy or suspected allergy, when the subject is using or contemplates using our products, we are pleased on his request to send her doctor the involved raw materials for patch testing, also such information concerning our products as may have a bearing on the case.

Since in the light of present knowledge it is not possible, save in specific cases, to make non-allergenic cosmetics, we believe the cosmetic requirements of the allergic individual should be considered by her doctor in the light of the formulas and general characteristics of the products she is using or contemplates using.

Luzier's Fine Cosmetics & Perfumes are selected to suit your practical cosmetic requirements and aesthetic preferences. They are made available to you by Cosmetic Consultants who assist you with the selection of suitable Luzier products and show you how to apply them to achieve the most becoming cosmetic effect.

Luzier's, Inc., Makers of Fine Cosmetics & Perfumes

KANSAS CITY, MO.

Coming in Hygeia

●

CADENCE EXERCISES
From the W. A. C. Manual

In the second HYGEIA article from the WAC Field Manual of Physical Training is presented a series of "cadence exercises," designed to develop flexibility in muscles and to equip the heart and circulatory system for increased physical activity. Every one should be familiar with these approved exercise routines. Coming in the December HYGEIA.

INTER-AMERICAN COOPERATION IN HEALTH WORK
By Col. Albert R. Dreisbach

Nowhere has the Good Neighbor policy been more productive than in the field of health. Benefits of inter-American cooperation in health and sanitation projects are reaching millions in the American republics.

MOTHERHOOD IN WARTIME
By George W. Kosmak, M.D.

America's housewives and mothers are flocking into war work to help beat the Axis. Yet, says Dr. Kosmak, we mustn't forget that their most important function—even in wartime—is bearing children and holding the family together. This straight-thinking article is a "must" for mothers.

VARICOSE VEINS
By Will O'Neil

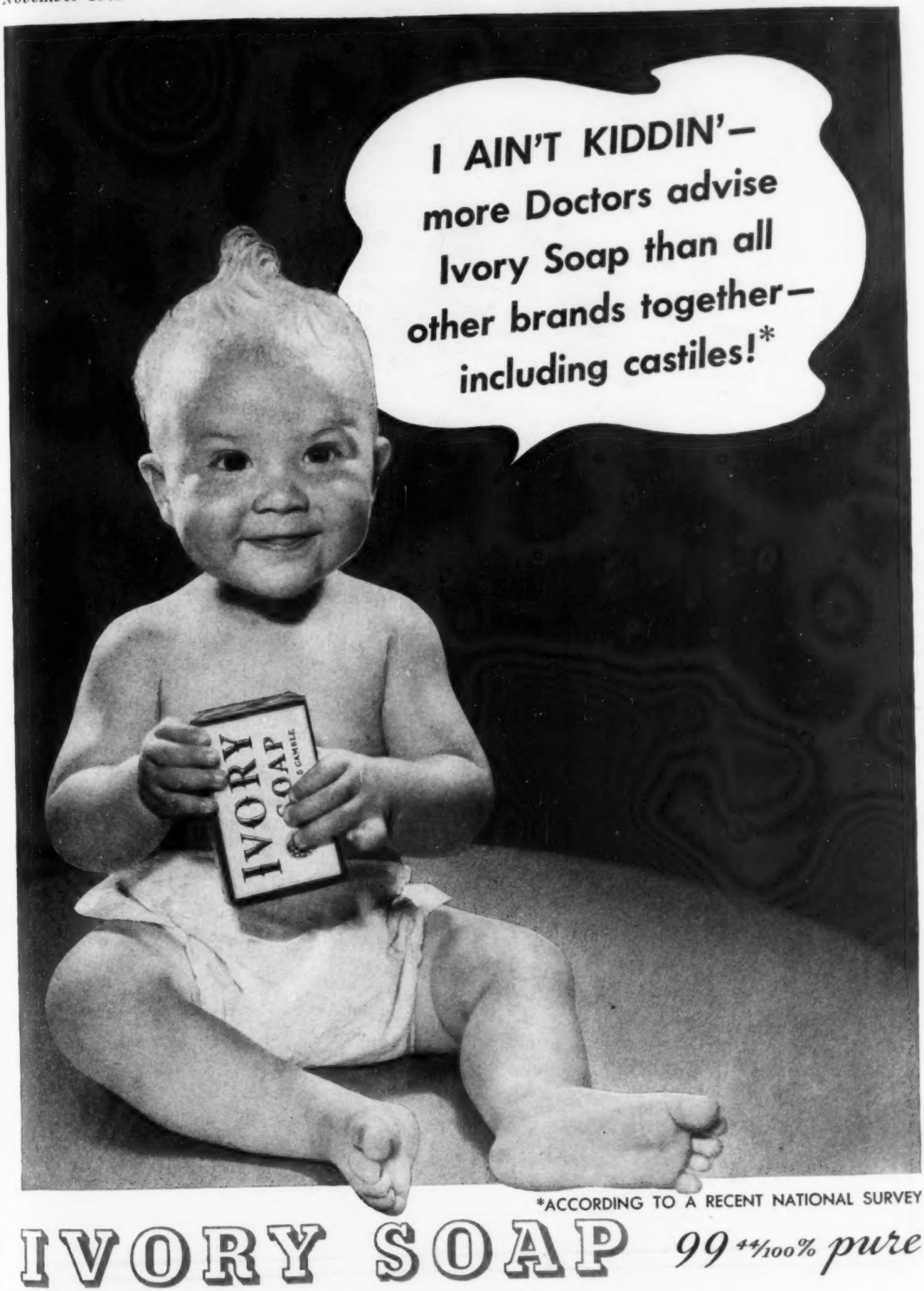
Clear, simple explanation of why people get varicose veins and how modern medical science treats this troublesome condition.

FACE THE FLOOR
By Lt. Samuel F. Harby, U.S.N.R.

There's an easy, efficient way to minimize the harm you do when you mingle with others while you're suffering from a cold.

OCCUPATIONAL THERAPY
By M. G. Westmoreland, M.D.

With thousands of young men returning from war, the work that's done by those who specialize in training injured or diseased bodies to carry on normal functions is becoming increasingly important. Dr. Westmoreland describes this useful work in a timely, informative article—of especial interest to young people studying career opportunities today.



*ACCORDING TO A RECENT NATIONAL SURVEY

IVORY SOAP 99 44/100% pure

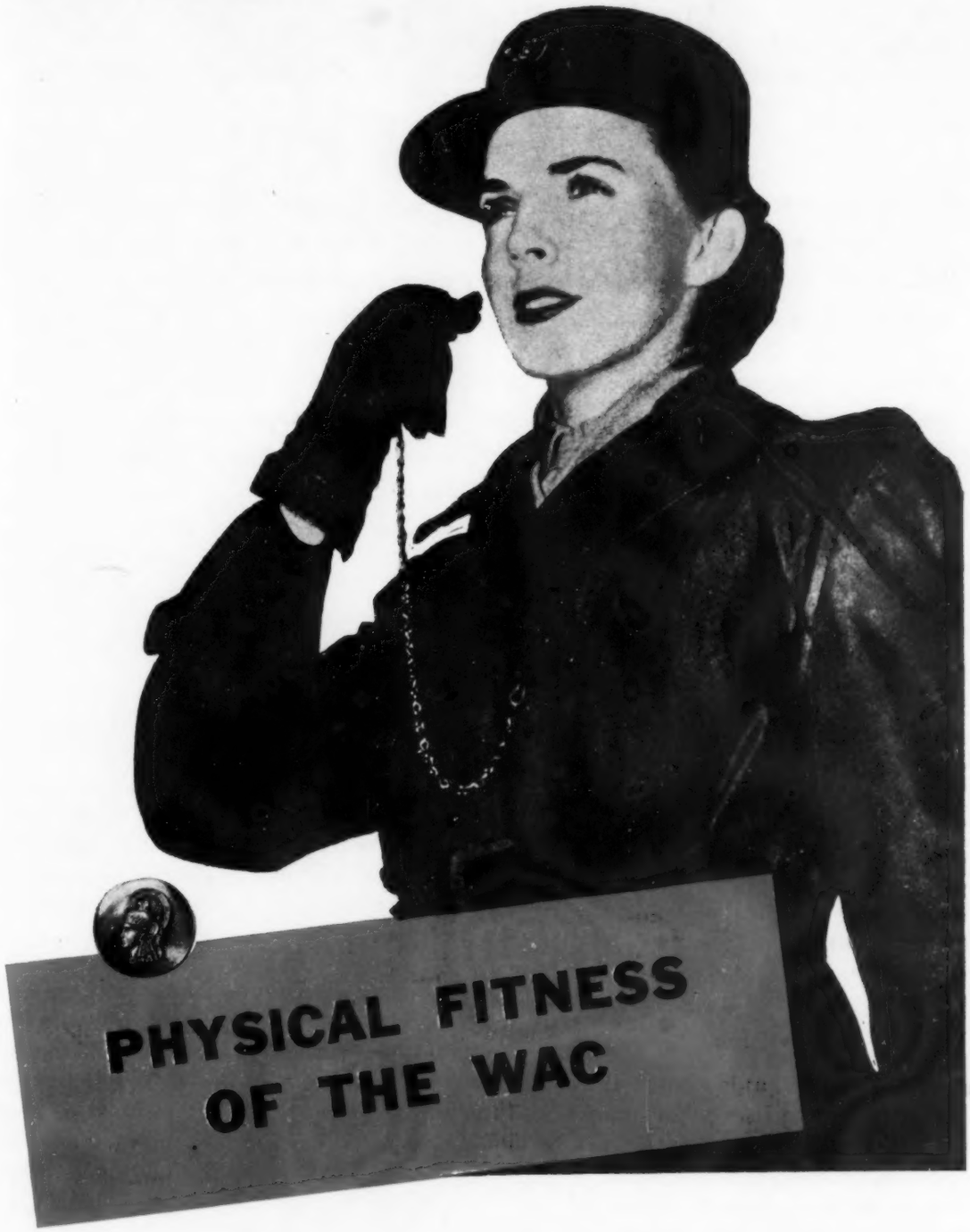
An Editorial by MORRIS FISHBEIN

IN THIS ISSUE HYGEIA begins the publication of the Physical Fitness Manual used in training the Women's Army Corps. This manual, developed under the leadership of Captain Donna I. Niles, acting director of the Well-Being Division, approaches the subject of physical fitness from a distinctly sound point of view. Physical fitness must produce all around development. Such development can be achieved only by developing all parts of the body. The program does not contemplate strong legs or strong arms alone. The spine, the posture of the body and indeed every tissue must be cultivated proportionately. Those who study this manual as it is published in this and succeeding issues of HYGEIA will realize that the number of exercises is not overwhelming and that the activities required are not extraordinary. Persistence in the performance of a few important measures is the key to success.

The system here used is progressive. In other words, the woman is not called on immediately for an exertion beyond her strength. Fitness is achieved by planned exercise related to the physiology and psychology of the human being. Our country has been victimized time and again by cults, fads and fancies concerned with physical exercise. Innumerable springs, exercising machines, weights and similar devices have been sold with the suggestion that they would produce fitness. Such apparatus, it will be discovered, is not necessary. Proper use of the muscles and proper understanding of muscle action will yield the necessary results. However, the fundamentals must be taught so that the person who is attempting to achieve symmetry of the body and physical fitness will realize the basic principles that underlie the accomplishment. Posture is dependent on balance. If a person knows that the large muscles of the chest are balanced by the large muscles of the back, the development of the proper relationship between these two sets of muscles becomes understandable.

This series of articles will offer the reader a number of daily exercises with a definite number of times to govern their use. As strength increases, the ability to perform these exercises a greater number of times also increases. Five or ten minutes daily will meet the need. If a woman has time to clean her teeth, brush her hair, take her bath and apply make-up, she will also have time to attend to these physical exercises. Their regular use will condition the body to its physical needs.

Introducing the physical fitness program now being used in the Women's Army Corps



PHYSICAL TRAINING IN THE WAC

WACS must be physically fit. Strenuous work demands almost perfect condition. Women from all walks of life who join the WACS are built to fitness. A well planned program of conditioning has been designed to meet this problem.

Today all women—in the home or at their jobs in offices or war plants—are facing new demands on their physical energy. Women everywhere may gain by following the instruction now given to members of the WACS. *Hygeia* has obtained permission to publish in this and succeeding issues the WAC manual of physical training.—EDITOR

HAVE THESE FOUR QUALITIES

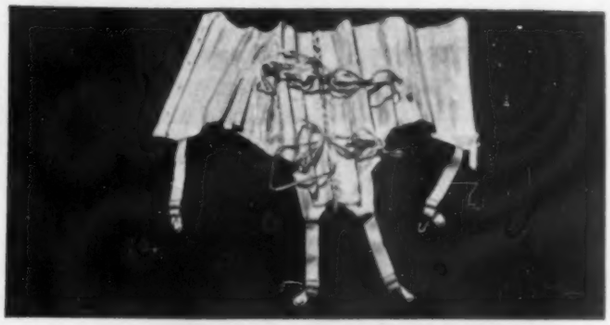
STRENGTH—*You must have strength.*—You must be able to perform with ease the heaviest tasks which you may encounter. You must be able to persist for long periods of time. This means neither "new" muscles nor large muscles. It means giving the muscles you have sufficient tone and capacity to do their work. It means *balanced* muscle control, with each set of muscles helping the others, to make work easier.

STAMINA—*You must have stamina.*—You must be able to stay with a job until it is finished. It means a strong heart that pumps more blood per stroke, that does more work with less effort. It means lungs that breathe deeply and regularly—that take in plenty of fresh, oxygen-rich air and expel used air. A strong heart and good lungs keep the cells of your body amply supplied with fuel, and rid them of the waste products of fatigue.

COORDINATION—*You must have coordination of mind and body.*—When your brain receives a command your body must respond instantly. The "communications system" between body and brain must be efficient. The muscular and nervous systems must operate together smoothly. You must be alert—mind and body must be a well-drilled team.

STABILITY—*You must have stability.*—You must be on the job all day, every day, as long as you are needed. Your nervous system must stand the "gaff." Your digestive system must function properly. Elimination must be regular. Menstruation must be normal and easy. You must be a completely reliable member of your unit. "In-and-outers" wreck an organization's efficiency.

Put yourself in the place of the women on the opposite page. Your duties may be as varied and as demanding. Get ready now.



FITNESS CAN'T BE FAKED

Physical fitness can't be faked. You are fit, or you aren't. Strength, stamina, coordination, and stability do not come in bottles, pills, nor powder, nor in foundation garments, nor in diets.

The test of true physical fitness is hard work. A girdle alone won't hold you up throughout a tough day in the cab of a truck. Firmly toned abdominal muscles will.

There are no "rules" against synthetic beauty. But war exacts a cruel toll of the woman who prefers a foundation garment to a basic foundation of muscular tone.

It is important that your complexion be clear because of functional regularity rather than laxatives; that your color be healthy because of a clean, well-aired bloodstream rather than lipstick and rouge; that excess fat be melted off, not by a weakening diet, but through strengthening exercise.

PHYSICAL TRAINING IN THE WAC

In civilian life women can get by on fashions, fads, and fancies. War, however, demands the real thing. Physical fitness is not something you put on and take off. It must be there—in you, with you—all the time, wherever you may be.

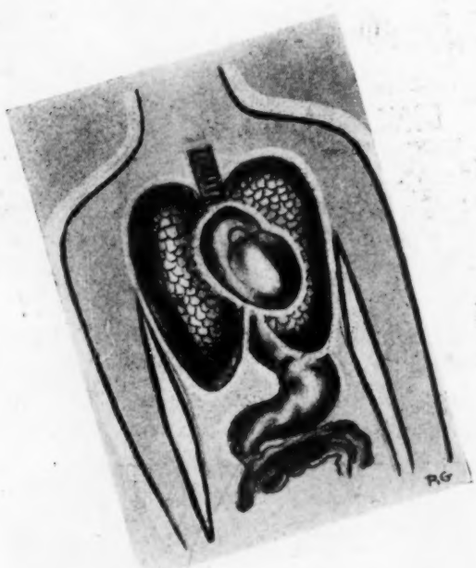
WHAT PLANNED EXERCISE DOES

MUSCULAR TONE—*It improves muscular tone.*—It helps to shed excess fat, or, if underweight, it builds a substructure of flexible muscles and healthy, compact flesh. Without materially increasing the size of the muscles, it improves their endurance and tone. It does this in a balanced manner, so that one part of the body is not overdeveloped at the expense of another. It teaches muscles to work together, easing the strain of work and conserving energy.

STABILITY—*It makes for stability.*—It gives tone to the muscles and organs of the pelvic region. It helps to relieve congestion and thereby menstrual distress. Duties can be performed without lessened efficiency.

ELIMINATION—*It aids elimination.*—It prods the sweat glands to action, removing impurities through the skin. It forces the lungs to expel more completely the waste products generated by the human motor. It stimulates and regulates intestines. A clear complexion is a natural result of regular, complete elimination.

RESISTANCE—*It increases resistance.*—Better functioning of the heart, lungs, and digestive and circulatory systems has a beneficial effect on the body as a whole. You can stand heat and cold better. You are less likely to be thrown off balance by illness and deprivation. That's important whether you're headed overseas—or holding down a man's job at home.



OTHER ADVANTAGES OF EXERCISE

POSTURE—*It improves posture.*—Planned or systematic exercise aims at reaching the whole muscular structure. This means that opposing muscle groups balance and thus maintain the bony structure in a balanced position. The correct bone alignment provides for the correct positions of the internal organs. Correct position of the organs assists them in the performance of their various functions. Good posture makes for grace, poise, and unstilted military bearing.

STAMINA—*It improves stamina.*—It forces muscles and organs to the limit of their capacity. Thus, it stimulates their development. It systematically steps up heart and lung action until these organs can work harder and longer with less effort and fatigue.

The WAC standing at attention in the picture below exemplifies good posture, yet tension and effort are obviously absent. Note the contrast with the silhouette at left—especially in head and shoulders

RELIEVES TENSION—*It relieves tension.*—Steady, prolonged concentration on the job tends to tighten nerves and muscles and increases fatigue. Planned exercise at suitable intervals relaxes the muscles and nerves and restores a feeling of well-being.

COORDINATION—*It improves coordination.*—It accustoms body and mind to work in perfect accord—the brain to receive and transmit orders rapidly, the body to obey orders correctly and speedily. Perfect coordination builds self-confidence. It inspires the confidence of others. It develops self-control and poise. It is the essence of leadership.

Many members of the WAC work at tasks precisely similar to those of women in civilian life. WAC physical training leaders know that ability to do good work depends on maintaining health

WHAT IS THE OVER-ALL AIM?—Planned exercise develops maximum body fitness in minimum time. It helps you maintain this fitness throughout your military service. All that follows in this program contributes to this end. Some of the exercises may seem too easy. Others may seem too hard. By first doing the easier ones faithfully, you'll be able to do the hard ones later—with ease. The results of planned exercise described above will then be fully achieved.

PHYSICAL TRAINING IN THE WAC

GOOD POSTURE MAKES GOOD SENSE

MAKE YOUR BODY "SELF SUPPORTING"

As long as you are in the Army you will hear much about posture. The pictures on these pages show you why.

Imagine a column of wooden blocks, one stacked above the other in orderly fashion. Each block rests firmly on the block below it, and the bottom block rests firmly on the ground. This column will not fall over easily, for it obeys a simple law of engineering. The column supports itself because it is erect and upright—there are no stresses and strains at work to pull it down.

Now picture a column stacked in a zigzag, haphazard pile. A slight touch and down it goes. For none of these blocks helps to support the others. On the contrary, each block weakens the structure. The entire column is prey to stresses set up by the crookedly placed blocks. Gravity pulls down on this column. It doesn't take much to make it collapse.

You wouldn't build your house in a zigzag manner. Neither is it wise to let your body fall into a zigzag shape.

The human body is planned to remain upright with a minimum outlay of energy. The various bones mutually support each other. The organs fall naturally into proper place. The muscles and ligaments have an easier time holding the structure together. Whether standing or sitting, walking or running, energy is saved.

The next time you are reminded of good posture think of the blocks. That doesn't mean that good posture is "wooden." It means that good posture is the most sensible way to keep your body erect.

It means holding your body in a way that makes it "self-supporting," without waste of energy, and with less strain on bones, muscles, ligaments, and organs.

It means making the most of your appearance. Standing or sitting with poise and grace, walking or running with perfect control.

It means you're in the Army—and proud of it.

WHICH OF THESE WOMEN IS YOU?

Here is the same posture principle which was expressed in wooden blocks. But this time it is expressed by the human body.

These pictures (above) are interesting. Study them for a moment. In which do the clothes drape more smartly? In which does the woman seem smarter, more alert, more military? In which does the bone structure seem to be more firmly posed? In which do the organs seem to have more room to function efficiently? Which of these women would you rather be?

THIS IS CORRECT SITTING POSTURE

This woman sits well back on the seat of the chair. Her feet are flat on the floor. She keeps the upper part of her body in a straight line. Note her straight back and flat abdomen. Note how gracefully she carries her head. She bends forward from the hips—not waist.

Before sitting, remember this hint: stand close to the chair with one foot in front of the other. Don't "search" for the seat. Keep the body erect and the hips tucked under as you bend your knees to sit down.

Actually, the woman at the left is exactly the same as the woman at the right. But in one instance her posture is good. Her head is balanced and erect. Her shoulders are relaxed and low. Her chest is held high. Her lower back is only slightly curved. Her abdomen is flat. Her hips are tucked under. Her knees are straight but not stiff. Her weight is toward the outer borders of the feet.

Now look at this woman droop into sloppy posture. Her head and neck fall forward. Shoulders are round. The back is hollow. Her chest is sunken. Buttocks and abdomen protrude. Her knees are locked, stiff. Her weight is on the inside borders of the feet, with ankles protruding inward.

Your body can assume a variety of postures. Another common fault, for example, is the overexaggerated military posture in which shoulders are held too far back. The spine is overly arched. Knees are locked and buttocks are thrown back. On page 821 are pictures of this posture at parade rest, and a salute.

Remember: In standing, only one posture is correct. It is the one at the left on page 786. You can test good posture with the "plumb line" test:

THE "PLUMB LINE" TEST

Drop a weighted string from a point opposite the middle of your ear. It should fall opposite the middle of the shoulder, hip, and knee. The weight should come to rest slightly in front of the ankle bone. One more point to watch: the toes should be pointed straight ahead when not at the military position of "attention." *(Continued on page 820)*

THIS SITTING POSTURE IS INCORRECT

Many women sit this way, with head and neck forward, shoulders rounded, back curved, chest flat, abdomen protruding. They look tired and, doubtless, they feel tired, for in this position the head lacks support. The bones, instead of resting firmly on each other, go off at angles. Muscles and ligaments are strained to keep matters under control. The organs are cramped. After a time, fatigue sets in and the weary body practically "lies down" while sitting.

TRAINING NURSES FOR WAR

By FAYE MARLEY

Nurses in training face conditions closely akin to those they may meet in field service with evacuation hospital units overseas

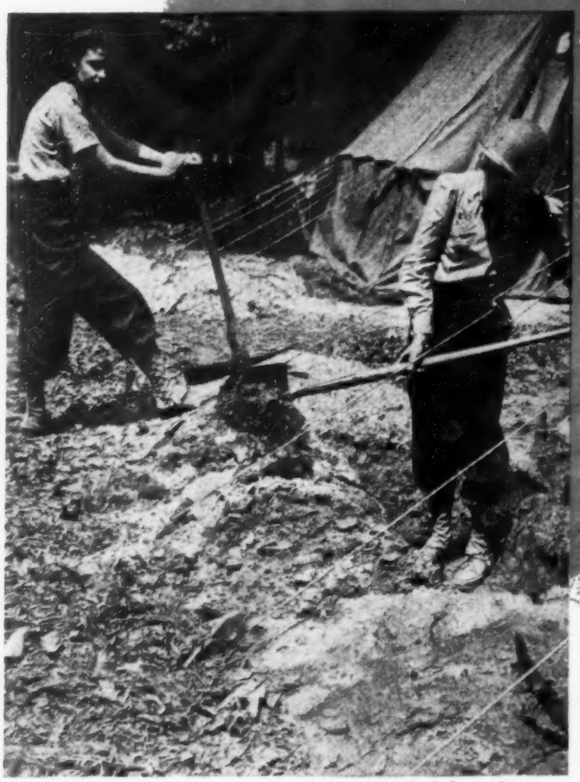
IF IT IS TRUE that this is a young man's war, it is equally true that it is a young woman's war—at least the more active duties in overseas service are best performed by women in their earlier years. Especially is this true of nursing, which isn't all bedside work these days. Recognizing the intensive physical discipline that is entailed, the Army and Navy have set an age limit for nurses who in their zeal might let patriotism carry them beyond their endurance. That limit is 45 for the Army and 40 for the Navy.

"Sorry," says the American Red Cross recruitment officer to the older women who eagerly apply for status in the official reserve. "It's the rules." That the rules are wise has been demonstrated in the physical hardening programs that prepare nurses for work outside the immaculate, sterile walls of their training hospitals.

"Nurses are much better prepared for war duty if they have had the four weeks of induction training given in the Service Commands," said Captain Kathleen H. Atto, assistant superintendent of the Army Nurse Corps, herself an example of physical fitness, in an interview in Washington, D. C. "An older woman who is used to hard exercise can stand hardship better than a girl in her twenties who is flabby. Generally speaking, however, the older women are better off serving in civilian hospitals at home while the younger nurses go to the battlefronts. There should be no feeling of resentment about this. One service is as important as the other."

The average age of the Army nurse is around 26, Captain Edna B. Groppe, also on the staff of the Army Nurse Corps, observed. "I don't believe the age matters a great deal, nor do I believe a girl has to be particularly athletic to stand the hardships of overseas duty. If she has the will and determination to face the discomforts that are an inevitable part of wartime nursing, and if she has reasonably good health, she needn't worry about her ability to stand whatever comes."

Slit trenches and fox holes may lie ahead for Army nurses going overseas. It's best to be prepared, so these nurses are learning how



American Red Cross Photos

Only three of the fifty-two nurses with Captain Groppe recently on maneuvers in Kentucky were in their forties, yet these women kept up with their sisters of 22 or 23. Variations in size and weight were greater handicaps than age.

"Short, stocky girls had trouble keeping pace with the others on the hikes," she said, "but even they would catch up during rest periods. We all did things we had never done before, such as crossing a log over a ravine, marching through rain and mud, crawling under fire of live ammunition. Every nurse wore a helmet which, with the steel part, weighs 3.9 pounds. She carried a pistol belt with first aid material and a canteen of water just as though she were on the battlefield. And she got up at 5: 30 in the morning to carry on her hospital duties."

Seventy nurses at Camp Edwards, Mass., members of the hospital unit, were the first women ever to test the infiltration course. It was a hot July day when they rode out to watch a group of soldiers negotiate the

Beauty shop. Army stylist in New Caledonia's bush country, these U. S. Army nurses have learned to live with hardships and like it

On bivouac ne[w] ... of the 27th ... work under ...

300 foot long battlefield. They saw the soldiers slither and creep over the area littered with dead stumps, logs and trees, pocked with trenches and craters and fenced with barbed wire entanglements. Then they were asked if they wanted to try it. The answer was a unanimous "yes," and a rush for the course.

Flat on their stomachs they awaited the barrage of machine-gun bullets and bursting dynamite. Live bullets whistled a scant 30 inches above the ground, splintering the trees around them, while charges of dynamite sent geysers of dirt and debris scattering for hundreds of yards.

Hardened veterans standing on the sidelines were overheard to remark that "only first class soldiers will go through the barrage without nerves cracking." When the fifteen minute concentration of fire and explosions finally died away, the seventy nurses had proved themselves first class soldiers. They survived the dreaded "no man's land" with- *(Continued on page 823)*

This is Ann

she's dying to *meet you.*

Medical problem number one in this world war is malaria. The protection of our troops in such areas as the South Seas and North Africa is vital to the winning of the war. To aid in such protection the War Department has already prepared more than a half million copies of the pamphlet here published and is distributing them to our soldiers and sailors.

1

5

This is how she does it.

Ann

moves around at night,
anytime from dusk to
sunrise (*a real party gal*),
and she's got a thirst.
No whiskey, gin, beer,
or rum coke for Ann

9

By and by Ann wants
Just another little drink
and off she goes looking for
a sap who hasn't got sense
enough to protect himself
When she finds him

down goes
her schnozzle
for more
BLOOD

10

and all those new little germs
climb down the drain pipe
and into the poor guy who
doesn't know it then, but
he is going to feel awful in
about eight to fourteen
days . . . because he is
going to have

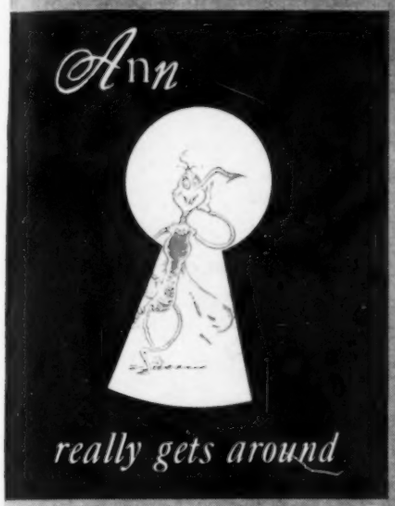
MALARIA

11

what to do about

Ann

Never give her a break.
She can make you feel like
a combination of a forest fire,
a January blizzard, and an old



2

Her full name is
Anopheles Mosquito
and her trade is dishing
out *Malaria*
She's at home in Africa,
the Caribbean, India,
the South and Southwest
Pacific and other Hot Spots.

3

She's the only one in the world who can give you *Malaria*, so if you can beat her, you're safe—
But, don't kid yourself that it's easy. She works hard and
Ann
—knows her stuff.

4

6

And she stands on her head to get it.

She jabs that beak of hers in like a drill and sucks up the juice.

7

When she picks on a victim who's full of *Malaria* Germs, up come the germs right into *Ann's* nice warm rumble seat where she gives them a free ride and they get together and make little germs . . . . . plenty.

8

dish mop. She will leave you with about as much pep as a sack of wet sand and now and then she can knock you flat for keeps . . .

12

The Army has anti-MALARIA combat units that carry on a steady battle by draining and filling ditches and pools where Anopheles mosquitos breed. They also spread poison in the waters they can't drain. They screen huts and spray

13

areas to kill them off, but in many places we have to go in this war they can't do any more than help.

the real job is up to
you.

14

15

You will be given
sleeping nets . . .
USE THEM
Nighttime while you are
pounding the pillow is when
Ann gets in her best licks
and you get
MaLAriA

16

and *Remember This . . .*
All the mosquito netting
in the world won't do you
any good if you don't use
it the right way . . .

Keep away from the sides

17

and don't forget that a hole
this big

in your net can cook you.

21

So if you must stick your
neck out—douse it well with
some of this dope. *Ann*
won't like it.

Put it on your clothes too,
where they are tight and thin

22

enough for her to plug her
way through. Your shoulders
and the seat of your pants
are favorite targets.
The Army Medical Corps
has made some mosquito
bombs to spray around.
They kill mosquitos and
keep them out of spots like
fox holes and shelter huts.

23

The best protection you have
with you all the time is your
clothes. If you go running
around like a strip teaser,
you haven't got a chance.

27

they find a nice new sucker
they give him the works.
If there wasn't enough
trouble waiting for you there
already—good old *Ann*
would take care of you and
make sure you got fixed up
fine—for keeps.

28

So, lay off the native
villages if you want to
keep the top of your
head on.

29

Use a little horse sense.
You can keep from getting
MALARIA if you've got
the stuff to stop a mosquito
from biting you. USE it.
And use your brain.

KEEP 'EM PATCHED

sew
them
up

or use adhesive tape.

18

REPELLENTS

A repellent is just a 75 cent name for stuff to put on you that will keep *Ann* away.

19

The Quartermaster Corps puts out some standard repellents that are a lot hotter than the old bottle of Citronella. That used to be good for about 15 minutes a dose and then they closed in again. These new ones will keep them off for 3 and 4 hours at a stretch.

20

23

24

Bathing and swimming at night where *Ann* hangs out really is asking for trouble. Head nets, rolled-down sleeves, leggings and gloves may seem like sissy stuff and not so comfortable—BUT, a guy out cold from MALARIA is just as stiff as the one who stopped a hunk of steel.

25

Now if you really are looking for trouble and you don't want to miss —just drop down to the nearest native village some evening.

26

The places are lousy with fat little *Anns* sitting around waiting for you with their bellies full of germs. They stock up on MALARIA bugs from the home-town boys and gals and when

30

What to do if Ann gets you.

The Medical Corps can help you recover if you get plugged, so report yourself in if you get a headache, chills, and fever.

DON'T FORGET THIS.

You can't get MALARIA unless *Ann* plugs you, but if she does, she can make you just as dead as a shell can, or lay you out flat for a long, long stretch.

Never give Ann a break.

She'll bat you down and it won't be funny.

31

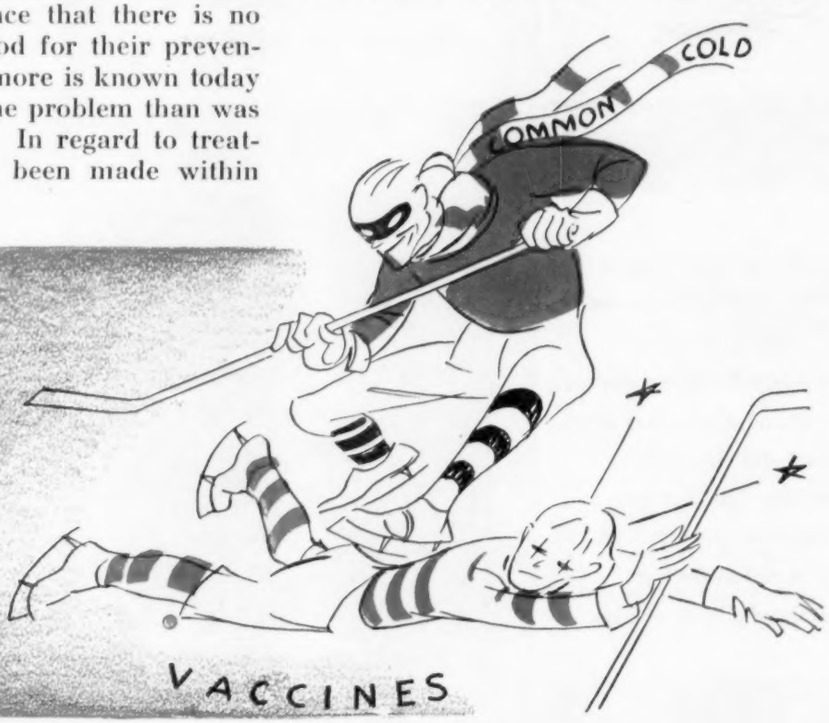
32

Common Colds and Respiratory Infections

By
CHESTER S. KEEFER

TO SAY that respiratory infections are responsible for more loss of time from industry than any other single group of disorders is only to repeat a well known statement. This subject has been discussed on many occasions; such topics as the incidence and economics of acute respiratory infections, the role of the physician in the control of respiratory infections, and air-conditioning have been widely discussed by industrial health groups.

Some of the methods which are available for the prevention and control of these infections, however, are less well known. While it will be admitted at once that there is no completely effective method for their prevention and control, at least more is known today about certain aspects of the problem than was the case some years ago. In regard to treatment, great strides have been made within recent years.



It is now agreed that the common cold is caused by a filterable virus, a tiny microorganism so small that it will pass through the pores of a filter, and that it is the most frequent of all respiratory infections. It is a widespread infection and occurs throughout the world. Epidemiologic studies disclose that the frequency of colds is between two and three per person each year. It has been demonstrated that the virus of this disease promotes and furthers infection of the respiratory organs by disease-carrying organisms such as the pneumococcus, hemolytic streptococcus, staphylococcus and influenza bacillus. It also facilitates the distribution of these bacteria in the community and establishes a background for the occurrence of severe outbreaks of respiratory diseases.

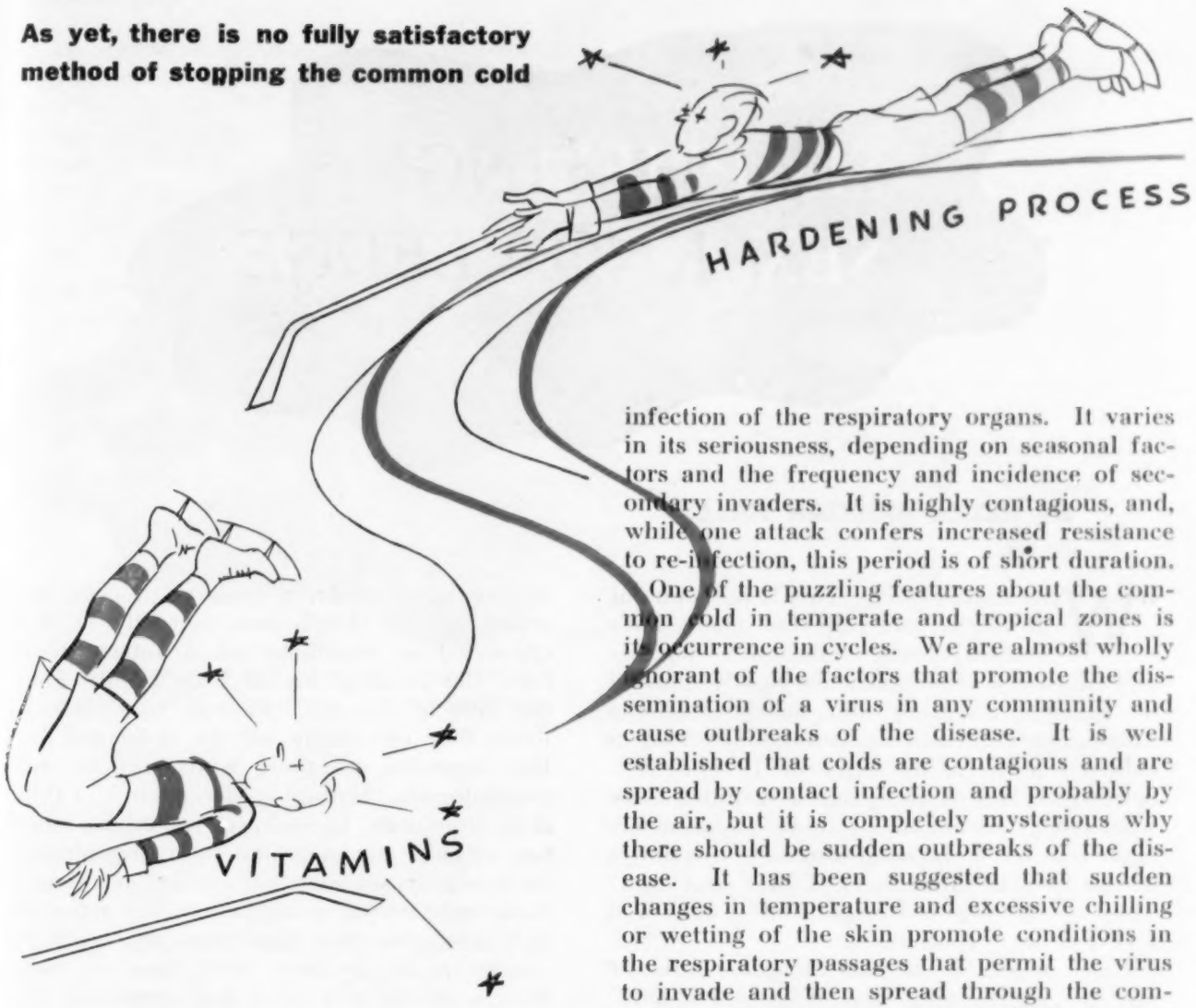
The incidence of colds in the United States varies throughout the year. There are three main peaks of incidence each year: the first in January and February, the second in April and May, and the third in September and October. The epidemic occurring in the spring tends to be the mildest, while that occurring in January and February is the most serious as measured by absence from work and severe complications. Infection is frequent in families, in schools, in industries and where overcrowding is common.

The common cold is highly contagious, and the incubation period is short, varying between twenty-four and thirty-six hours. The infected individual can transmit the infection to others only during the early stages of the disease; that is, during the first day or two after the onset of infection. The most infectious period is the first day, and it is known that a patient may actually infect others from four to six hours prior to the development of his own symptoms.

Carriers of the virus of the common cold are thought to be infrequent, but on this point there is very little precise information. The opinion prevails that carriers are encountered only rarely, but this is a matter which needs more investigation.

Once colds become prevalent in any community, many susceptible people who are exposed to an infected person come down with

As yet, there is no fully satisfactory method of stopping the common cold



the disease. The degree of susceptibility and resistance varies from one individual to another, and from year to year. This is brought out in epidemiologic studies in families and in schools. Resistance seems to increase with age, since there are fewer colds in the elderly than in the young.

A certain degree of immunity, as judged by resistance to re-infection, develops as a result of a cold, but it is of short duration. In experimental studies made by Dr. A. R. Dochez and his associates it was found that resistance lasted about a month in the chimpanzee. In man, it was estimated by Drs. J. H. Paul and H. L. Freese to be not less than twenty-three days, with an average of about seven weeks.

It seems clear, then, that the common cold is due to a filterable virus and that a part of its action is to promote secondary bacterial infection of the respiratory organs. It varies in its seriousness, depending on seasonal factors and the frequency and incidence of secondary invaders. It is highly contagious, and, while one attack confers increased resistance to re-infection, this period is of short duration.

One of the puzzling features about the common cold in temperate and tropical zones is its occurrence in cycles. We are almost wholly ignorant of the factors that promote the dissemination of a virus in any community and cause outbreaks of the disease. It is well established that colds are contagious and are spread by contact infection and probably by the air, but it is completely mysterious why there should be sudden outbreaks of the disease. It has been suggested that sudden changes in temperature and excessive chilling or wetting of the skin promote conditions in the respiratory passages that permit the virus to invade and then spread through the community. There seems to be little doubt that these environmental factors are of importance, but their precise role remains unclear. The studies of Paul and Freese, carried out in Spitsbergen, shed some light on this problem. In Spitsbergen, which is an extremely isolated community in winter, it was found that an unfavorable environmental factor, such as a sudden drop in temperature, was not necessary for the development of an epidemic of colds. It was noted, however, that the arrival of the first boat of the shipping season was usually followed by an epidemic involving the whole community in a short period of time. This suggests that the introduction of the virus from outside is more important than the climate. Also, it was noted by Paul and Freese that trappers who fell through the ice did not develop colds during the winter and spring, but only did so if such an accident occurred *after the men had been to town in the summer and fall.* Such obser- *(Continued on page 837)*

SIMPLIFY SEX

By HELEN MORGAN HALL

"WHO should tell?" This is the name of an intellectual volleyball game that's heatedly being contested by parents and educators. Both sides are rightly shocked by surveys revealing that nearly half the illegitimate babies in the country are born to children between the ages of 10 and 19—bewildered Mollys who protest, "I didn't know what it was all about." Parents and teachers agree that some one must confide to the Mollys of the land the true facts of life. But who? They are tossing that responsibility back and forth; neither wants it.

Psychologists know how the game must be settled. To the question, "Who should tell?"

The day is largely past when sex knowledge was taboo. The problem is: Who should tell?

they promptly answer: "Both." But the primary telling should be done by parents, not teachers.

This solution is inescapable once you realize that the unfolding of the mystery of sex and mating is, properly, a gradual process, provoked by the child's own curiosity as it is expressed in questions asked intermittently from the toddling age of 2 or 3 until about the time of puberty. Parents who seriously think they can dump all the obligation into the classroom are those who write to child psychologists, "My boy is 14 years old. I think it is time now he learned something about sex. Could you send me some pamphlets?" Such parents suppose that Junior, whose questions they evaded years before, has remained dutifully ignorant. The facts are quite the contrary. Junior may have received, along with a lasting and damaging conviction that sex is a shameful matter, garbled conceptions from smutty magazines, burlesque houses, kids' sniggering boastings and crude diagrams. Or he has gotten the answers his parents withheld by personal experience.

Parents, then, must face reality. Their responsibility begins when a tot is first enchanted by the world of its body. It continues till along about adolescence when, in response to the child's awakening intelligence, simple biology texts, sex education and nature books may supplement the parents' words. The story may then be continued in the classroom, whenever it logically comes up. It would occur naturally in biology. Here, now, the propagation of fishes, plants and birds is taught, but the story of the reproduction of man is missing from the curriculum. It fits well into courses on hygiene and physical education. But the wishful notion of parents that teachers can give 14 year old Junior a sudden and complete revelation of sex is incompatible with truth.

In nursery schools, animals are sometimes kept and mated so that teachers may explain how animals and human beings are born. But generally speaking the teacher's function arises about the time of junior high school and consists mainly of enlarging on what Junior already knows, giving the subject perspective and suggesting the social significance of sex.

Country children may learn sex by observing Nature. Still, they must have instruction

Mr. and Mrs. American Parent are, then, the first tutors regarding sex that a child should rightfully know. But thousands of average, wide-awake young mothers and fathers become, when this obligation is set before them, as flustered as their Victorian grandmothers would have been. Their indecision was plaintively expressed recently by the mother of a 3 year old daughter who protested, "I *know* I should tell Sally the truth but I just don't know how!" We briefly surveyed other parents we knew—college graduates, living in suburbs or city, young and alert, readers of best sellers, conversing readily about vitamins and calories, postwar reconstruction. You'd expect parents of this sort would easefully enlighten their offspring about human reproduction. But one mother admitted that she had used the archaic evasion, "The doctor brings babies," in answer to her child's inevitable query. An expectant mother whose child noticed "how big" she was getting chirped brightly. "Yes, isn't Mummy getting fat!" One mother, mindful of her duty, sought information in books and pamphlets, only to discover that here, too, the truths of sex often hide behind a barrier of written generalities.

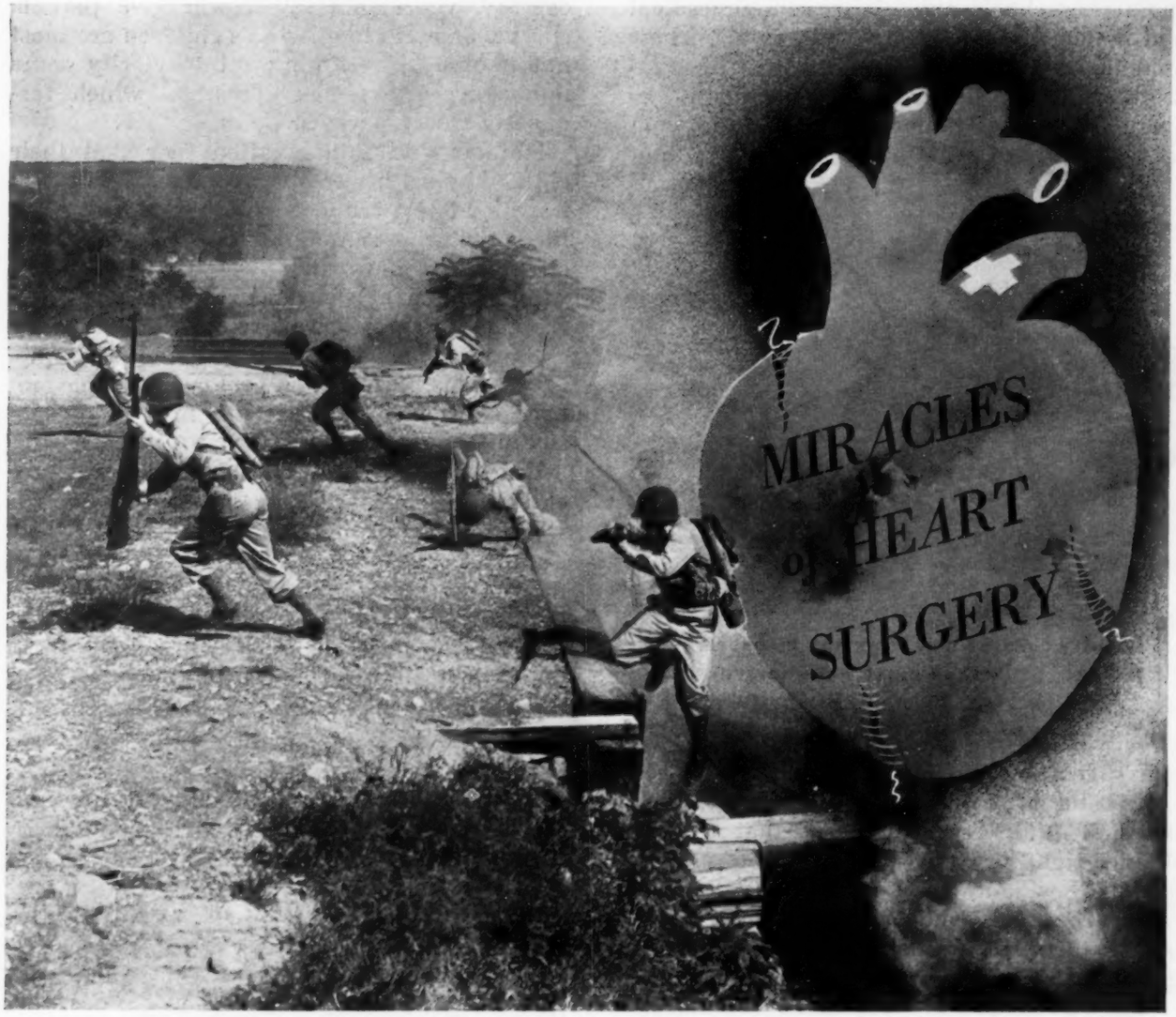
We have consulted psychologists, and we submit the following guide based on their counsel, which, we hope, will give parents specific answers to questions children are most apt to ask. First, we want to clarify some notions regarding sex education which frequently worry parents.

Mothers and fathers often fear that their child, having been told about sex, will feel impelled to experiment. This is not true. The little girl who is familiar with the anatomic structure of boys and girls will shrug, "So what?" when a comrade whispers, "Did you know boys are different from girls?" It is the child who *hasn't* been told about sex who, because his perfectly natural curiosity has not been satisfied by his parents, may indulge in sex misconduct.

Other factors besides ignorance may lead a child to misbehave. One boy whose parents were excessively modest became a Peeping Tom. Two fussing elderly aunts prevented their little ward from kicking up her heels like the young colt every child should be. Kept indoors, the little girl was so bored she drew vulgar pictures. Ten year old Percival, taunted unmercifully about his "sissy" name by his playmates, took to spouting filthy words to prove his masculinity.

If sexual misconduct takes the form of masturbation, then parents are truly horrified! One mother taped her tot's fingers and harnessed his arms to the crib every night to prevent him from masturbating. A young mother, in a hushed voice, spoke to us of the "awful things" she feared her child might do. It turned out she meant the child might toy with itself. Actually, modern medical scientists are agreed that masturbation is not misconduct. It is not harmful *(Continued on page 833)*

Unfortunately, many children get lasting, damaging impressions from sex "literature"



Acme

A BOMB SPLINTER tore open the gunner's chest and lodged in his heart, but he will live to tell the tale. British military surgeons worked over him for two and one-half hours while the battle was raging. The operation was performed in a North African field hospital, and the gunner is now recovering. In any other war when a soldier was wounded in the heart, he died. This war is different.

Surgery has made such sensational advances in the last five or six years that a successful operation on the heart is no longer a rarity. Even now new procedures are being developed which should save many more lives before the war is over.

Injury of the heart is not necessarily fatal. If the surgeon can operate at once, the chances are 50-50 that a soldier with heart wounds can be saved. The heart is enveloped by a firm, baglike membrane—the pericardium. The accumulation of a few ounces of blood in the pericardial sac causes acute cardiac compression. The heart is actually throttled by the pressure of the blood that surrounds it. Even a few minutes' delay in relieving the compression may mean death.

Shock is so profound that a little novacain injected into the skin may be the only anesthetic required. It can be supplemented with a few whiffs of gas if necessary. The incision is made across the left side of the chest between the third and fourth ribs. Parts of these ribs are removed and the tense pericardium is exposed. When the pericardium is opened, the blood compressing the heart can be quickly drawn off by a special pump. This blood is used for retransfusion into the soldier's veins.

When the compression is relieved, miraculous improvement occurs, although blood continues to spurt from the torn heart muscle. The bleeding is stopped by suturing the injured area with a few fine silk threads. Just before the operation is finished, a powdered sulfa drug is dusted over the heart to prevent infection.

The fierceness of modern battle conditions produces innumerable wounds of the heart. Undreamed of improvements in operative technic are to be expected. A little more than a generation ago, the most famous surgeon of his day said, "The surgeon who would attempt to suture a wound of the heart would lose the respect of his colleagues." Surgery has come a long way since then.

The suturing of heart wounds is only one of the miracles of modern heart surgery. Wounds of other parts of the body sometimes cause a normal and undamaged heart to stop beating. Unless the circulation is restored in a matter of minutes, irreparable damage to the brain results.

Whether this cardiac calamity occurs on the battlefield or in the factory, treatment must be swift and heroic. An incision is made with any available instrument. Then the surgeon grasps the heart and rhythmically massages it at a rate of sixty times a minute. The squeezing action simulates the pumping of the heart and forces the blood to circulate. If all conditions are favorable, normal beating is resumed.

Serious or fatal infection may follow such ill-prepared surgery; but with a human life at stake, the risk must be taken. There is only one degree of death and it is permanent. Death will certainly result if nothing is done, or if the surgeon waits until instruments can be sterilized and an operating room prepared. If the beating of the heart is restored, the victim has a chance to live, even though infection should develop.

Massage of the heart saved the life of a Boston man a short time ago. His heart was perfectly normal, but it suddenly stopped beating while he was undergoing an operation. The surgeon began massage at once while powerful stimulants were injected directly into the heart muscle. After twenty minutes of cardiac massage, regular beating was resumed and the operation was successfully completed.

Emergencies provide the field for the most spectacular miracles of heart surgery. The wonders that are being worked among victims of chronic heart disease are no less sensational.

Some babies are born with heart trouble—congenital heart disease. One type of congenital heart disease, patent ductus arteriosus, is due to an abnormal channel connecting the two large arteries that lead from the heart. The blood circulates through the abnormal channel or duct causing severe heart strain. Victims of this disease are undersized and sooner or later they become chronic invalids. For them, complete surgical cure is now possible.

A heavy braided silk thread tied around the abnormal duct closes it just as a pursestring closes a purse. It all sounds simple, but operations in this area may be extremely difficult, even for a specially trained surgeon. Death and complications are ever present specters. The outlook is so dark if no surgery is done that most doctors consider the risk well taken.

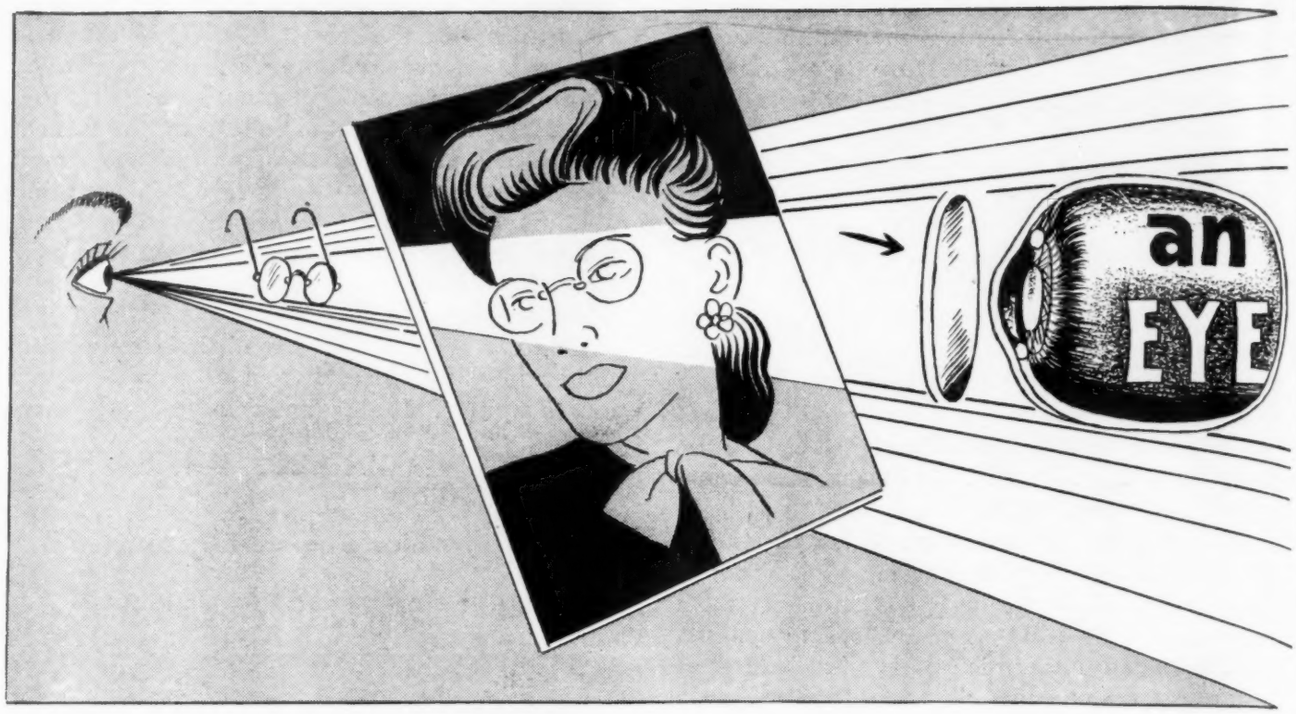
War provides a powerful stimulus for development of new surgical technics. As time goes on, new miracles will save lives and restore health for civilians

By ROBERT H. FELDT

The first successful operation of this type was performed by young Dr. Robert E. Gross in 1938. Since then, more than 100 cures have been reported.

Aside from underdevelopment and heart failure, people with patent ductus arteriosus are constantly exposed to another severe hazard. The pounding force of the blood as it rushes through the duct makes the region susceptible to infection. If the deadly streptococcus gets into the blood stream, it may grow and multiply in the duct. Subacute bacterial endarteritis results, but even this dreaded killer can now be cured surgically.

Dr. Arthur Touroff, of New York, was called into consultation in a case of subacute bacterial endarteritis. Like all good surgeons, he understood the dangers of operating in an infected area. But he could not *(Continued on page 830)*



By NANETTE KRAMER

"YOU'LL never see better than this without help," the ophthalmologist advised his patient. "After all, you are 70 years old." The old man's daughter led him out of the doctor's office. Yet today that man is walking unaided and has nearly normal vision—with the help of contact lenses.

The curtain dropped. The audience, still under the spell of the beauty and charm of the actress, remained hushed for the moment; then came a burst of applause. The actress returned to the stage, smiled graciously. She is back in her dressing room now, and she is casually removing the contact lenses from her nearsighted, though beautiful, eyes.

The ball hurtles down the field with 195 pounds of boy after it. It is a touchdown again for McCarthy. But only last year he wore glasses and could not go out for football.

That youngster in the first row wears contact lenses—imagine a chorus girl with glasses!

Today's Red Riding Hood met the Wolf. "What big eyes you have," said the Wolf. But this modern Red Riding Hood stuck her finger in her eye, not his, and calmly removed her contact lenses. Whereupon the Wolf fainted and the young lady took a taxi and went home.

This is not fantasy. Neither is this a story of supernatural miracles, or of mind over matter, self hypnotism, or what have you.

Contact lenses are here. Hundreds of people are wearing these invisible eyeglasses. The surprising fact is that the majority who use them are men, not women.

Contact lenses, which are fast replacing old-fashioned eyeglasses, are thin glass or plastic hollow cups that fit over the eyeball and underneath the eyelid. They are ground to individual prescription, the same as regular glasses. And the fact that you are wearing glasses is your own secret, as they cannot ordinarily be seen.

From an optical point of view, contact lenses are quite different from ordinary glasses. Because the lenses cover the entire eyeball, vision can be improved up to 30 per cent, since the principal planes of the lenses are not moved forward, as in ordinary glasses, and the background is not distorted or obliterated.

For years I had flirted with the idea of contact lenses. All the questions that people ask me now that I have them were questions that came to my mind also. How do you put them on? Do they hurt? Aren't you afraid they'll

break? Do they just pop out? Are they injurious to the eye?

My case was one of pure vanity. I just don't like eyeglasses.

I made the appointment. My doctor met me at the optician's office to have the molds made. They were both there for the kill—the doctor and the technician, one of the few men in the world who make these lenses. There was no backing out now. I was in for it. They had me in the chair. My eyes had been anesthetized. I was scared. "Open your eye," the doctor said. Then they slowly poured the gelatinous material into my eye. I relaxed. It did not hurt. Within forty-five minutes the molds were thus made for my contact lenses. There was little discomfort, no pain. It was quickly and deftly done.

Years ago, lenses were made only in spherical form and only of glass—even though it is rare to find a spherical eyeball. This type of lens is very painful. Today they are molded to fit the eyeball by taking an impression with a soft, gelatinous material. A cast is made from this for a temporary fitting lens, and this is fitted to the patient's eye so that it is the right size and shaped perfectly. Then from the temporary lens the permanent one is made. All this is done with infinite care.

The next appointment was for my first fitting. The same little office and the jovial technician, but this time the room was filled with other patients: a boy who was determined to get into the Air Corps and thought that he could fool them—a young girl whose only hope of vision lay in these little plastic wafers—a famous musician. Each one asking the others about their reactions to the lenses.

It was my turn. It takes about ten minutes to learn to put the lenses in the eye and to remove them. First, you wet the outside of the lenses with saliva. Then you pour a lukewarm salt solution in the cup of the lens. A rubber suction cup holds it steady. You bend over from the waist, look down and to the side, hold the eyelids open with one hand and, in much less time than it takes to tell, the lens settles quickly in place. To remove the lens, you use the suction cup, and in one split second it is out. The entire process is painless and speedy. Only don't do it in front of your Aunt Sophie—it might affect her appetite.

Every one seems to have solution trouble and bubble trouble. The solution, which is composed of salt and water, has to be of the right strength for your eyes, and only experimenting with the amount of salt can settle this.

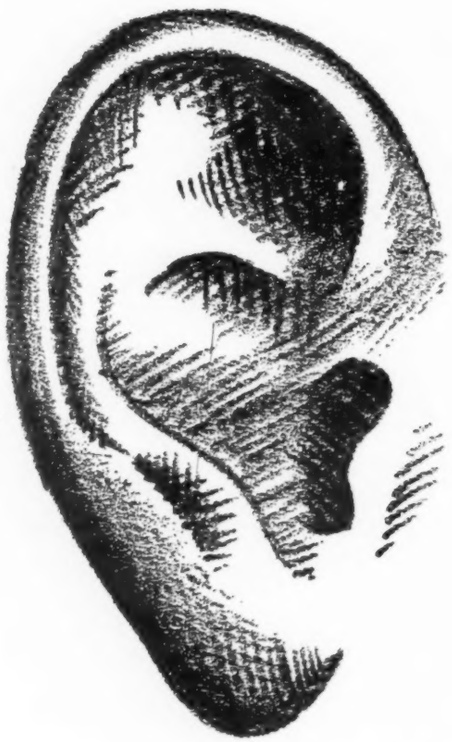
In difficult cases of adjustment to the right fluid the patient is en- *(Continued on page 832)*

. . . and the Deaf Hear!

By MARION F. F. GRAHAM

DEAFNESS is an enemy that attacks an individual as suddenly and forcefully as the foreign powers who attacked and threw peaceful lands into the chaos of war, for wherever it strikes, that individual is at once cast into a chaotic existence that disrupts his normal life contacts and calls for complete and difficult adjustments.

Only we who have known normal hearing, who have experienced the emotions which



accompany gradual loss of hearing and have rehabilitated ourselves, by means of a hearing aid, in a world of sound, can understand, speak and write about the problems and adjustments that confront those who have impaired hearing.

This article is especially written for those who are just beginning to make these adjustments and for those having normal hearing who desire to be helpful in the process of rehabilitation.

Hearing aids are the greatest weapon with which the hard of hearing can fight their relentless foe. It is also desirable that persons with unimpaired hearing have a sympathetic understanding and appreciation of the conditions under which their less fortunate neighbors must live.

The initial tragedy of impaired hearing is that the victim does not immediately recognize his loss. He sincerely blames his inability to understand on the faulty speech of others, until his condition becomes so acute he is forced to accept impaired hearing as an actuality, at which time he is reluctant to acknowledge it openly.

Immediately on recognizing the presence of hearing impairment, the person should consult a physician. If the damage is beyond repair, no time should be lost in securing a hearing aid and in beginning a social and professional adjustment.

We who have unsatisfactory hearing must also learn to utilize silence and solitude and equip ourselves for useful living with the help of the hearing instruments that can bring sound to our ears.

Personality need not alter or life contacts be sacrificed if one who is deprived of normal hearing will not allow himself to grow deaf mentally as well as physically. Withdrawal from society, giving up one's profession, loss of confidence and inertia are some of the tortures that follow in the wake of impaired hearing. Another result of hearing loss which is often overlooked is that as the impairment becomes progressively worse the person whose hearing is affected forgets sounds through not hearing them and begins to mispronounce or misuse words, not realizing that his speech as well as his hearing is affected. Thus the person with hearing loss may also develop a speech impairment which imposes a further difficulty on normal life and communication with others. The early use of a hearing aid will counteract these and many other disadvantages of deafness.

When one becomes aware of an impaired hearing condition, he should investigate fields

of endeavor in which the demand on hearing ability is not of paramount importance. For instance, it is possible for teachers to convert their wealth of knowledge, skills and experience into professional writing. There are many arts and crafts that require a minimum of ability to hear. The war has created new channels of service for those who hear artificially. Many of these men and women are employed in defense plants, or have been selected for noncombatant duty in the armed forces.

The retention of as many life contacts as possible, both social and professional, is an aid toward keeping one's morale in the face of what appears to be unsurmountable handicap.

The recognition rather than denial of impaired hearing will facilitate growth during the period of rehabilitation for the sufferer and will make cooperation easier for his associates. It is far better to acknowledge impaired hearing and ask friends to speak clearly and slowly than to try to conceal an obvious fact and become a source of embarrassment to oneself and others.

Oral reading and speech lessons will enable deafened persons to retain desirable voice and speech. There is the case of a woman who, having lost her hearing, became an early user of a hearing aid. Undauntedly, she cultivated her personality to such an extent that she was selected by a large college to teach a course in personality development. She also became expert in lip reading and set about giving instruction in this art to as many as wished to come to her for help.

Increased concentration for those who spend all or part of their time in silence should not become for them a habit of inattention. It takes a bit of doing, but with faithful practice a hard of hearing person can be as mentally alert to his environment as those who are aware of every sound. One who has experienced loss of hearing must learn to dominate concentration rather than to allow it to dominate him. In solitude, concentration permits greater efficiency in work, but in the presence of others it can assist the individual's sensitiveness not only to sound perception but to understanding as well.

Limitation of interests and capacities is not as pronounced for the deaf as is commonly believed. Early use of a hearing aid reduces the loss of sound memory to the minimum, and perseverance keeps one participating in most of the activities in which he was engaged prior to impairment.

At first, the only reward for faithful wearing of the hearing aid seems to be discomfort and headaches caused from hearing too much noise and not enough intelligible sound, but it must be remembered that the return of useful hearing is as gradual as its loss, and that patient use of the instrument will bring back understanding in whatever degree possible, commensurate with loss of sound perception.

Adjustment to any artificial aid requires patience and usage. It isn't easy to become accustomed to wearing artificial teeth, artificial limbs or "crutches" of any kind. *One should never expect too much of anything that is artificial. It can never be as satisfactory as the natural function was.* One cannot walk several miles on the day the doctor removes the cast from a leg that has been broken, do a day's work with an arm that is mending from a fracture, or eat a complete meal the first time he wears artificial teeth. Neither can one expect to hear and understand all sound perfectly as soon as he begins to use a hearing aid. The simplest everyday sounds, such as the telephone bell, the door knocker and the ticking of a clock, may present early problems in remembering sounds. Often we do not recognize an acquaintance whom we have not seen for some time, but we do not refuse to know him after we have been reminded of his identity. We learn his face again, and the next time we meet we know him instantly. So it must be with every sound which, in silence, has been forgotten and is heard again through the aid. The patient, intelligent relearning of sound identities is necessary in the rehabilitation process.

A woman wearing her hearing aid for the first time heard an unfamiliar sound as she was working in her garden. Failing to identify the noise she asked her neighbor, "Can you tell me what it is that I hear?"

"Why, yes," he replied, "that is a cricket." Before her ears were silenced she had no doubt heard the chirping of a cricket many times, but in the interim between silence and the restoration of sound, she had forgotten.

The most helpful advice to those who are new to the experiences of impaired hearing and adjustments that must accompany the wearing of a hearing aid is this: *Do the most you can do with what you have to do with.* Live fully, normally *(Continued on page 836)*

THE FOOD WE EAT—V.

Feeding Grandfather, Grandmother, and Junior

By MIRIAM ZELLER GROSS

"Use three physicians still, first Doctor Quiet Next Doctor Merry-Man, and Doctor Diet."

SO RAN the old couplet, which included plenty of sense—as applicable today as in old England whence it came, although the "Quiet" part cannot be interpreted too literally in the case of Grandfather, who probably has taken on a war job at 65, or Grandmother, who divides her time between Red Cross and keeping up with a flock of strenuous grandchildren. And the "Diet" portion should not be translated to mean nothing but tea and toast for either of the oldsters.

Appreciating the greater problem of the homemaker with war economies making it a patriotic duty to see that each member of the household gets enough of the right foods, authorities comprising the Council on Foods and Nutrition pass on helpful information in a series of articles published in *The Journal* of the American Medical Association. Food requirements of the very young and old are stressed, urging the particular safeguarding of these age groups. Scientists point out that our infants and toddlers are building their foundations of strength, courage and morale to serve or defeat them later, when they must assume and attack the problems their elders are busily amassing in a war-torn world. Our oldsters, on the other hand, as never before are tackling the responsibilities and activities of civil life, and doing it, incidentally, with resulting good for both industry and themselves.

As Dr. Edward L. Tuohy of the Duluth Clinic says, "Age conceals a vast reservoir of talent, skill, wisdom and experience, not to mention muscle and brawn, *if proper food maintains reserve.*" In other words, this time of national emergency demands the utilization of all assets, including the vast but little used capabilities of American men and women of older years. The extent to which we shall benefit from such capabilities depends much on what they eat. Dr. Tuohy points out that keeping these people at a high level of efficiency is our obligation as well as to our advantage; he says, "This is a machine war—the product of a machine age. In our depression years, unemployment, broken homes, improvident children, unpractical subsistence, relief or pensions robbed the old of employment, position, honor and a place in the community. With such crying needs for all possible man and woman power, it is 'now or never' for us to give back to this group some of what they have lost." Industrialists are urged to remember that while youngsters establish records in short sprints and hurdles, the distance runner must be older—with the advantages accumulating from skill and the conservation of strength.

People are advised to begin training for old age during middle life, so that they will not go into the later years with a lot of bad food habits. While these habits can be changed, it is more difficult in later than in middle life to realize that eating more of this and less of that will add life to years instead of years to life. While every normal man and woman prefers action and efficiency to dragging out a vegetative, almshouse existence, appetites molded by habit are the criteria by which most older people select their food.

Food and drink exhilarate oldsters as nothing else. Add sleep, says the physician, and recuperation results. *(Continued on page 806)*

Can Proteins Really Be Graded?

Amino acids, the constituents of protein, are arbitrarily termed "essential" and "nonessential." Essential are the ten which cannot be synthesized in the body; nonessential, those that can be synthesized by combinations of the essential group.

All amino acids are found in protein foods whether of animal or plant origin. But in those of animal origin all the ten essential amino acids are present while the combination of all of them is comparatively rare in plant proteins. Hence these latter often have been termed "inferior proteins" and have been considered less important. Is such grading justified?

The function of the essential amino acids is twofold: a) replace in the tissues the "worn-out" members of their own group and enter the structure of newly formed tissues; b) aid in the synthesis of nonessential amino acids, if these are lacking. Thus the nonessential group is virtually of equal importance, since it spares the essential group from being used for their synthesis.

Hence all protein sources are of nutritional importance. This is of special significance so far as cereal-derived foods are concerned.

Cereal breakfast foods contain an average of about ten per cent of protein, their actual contents ranging from 7% to 14%, depending on the grain source from which derived. Their protein is highly acceptable to the human organism, contributing its share to growth as well as maintenance.

When one ounce (prepared cereal or its equivalent in cereals to be cooked) is served with four ounces of milk and a teaspoonful of sugar, this palatable dish presents about 7 Gm. of protein, biologically adequate through the contained milk, 33 Gm. of carbohydrate, and 5 Gm. of fat, a total of 205 calories, and appreciable amounts of B-complex vitamins calcium, iron, and phosphorus.

The presence of this seal indicates that all nutritional statements in this advertisement have been found acceptable by the Council on Foods and Nutrition of the American Medical Association.

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A cooperative effort to present the nutritional value of cereal breakfast foods (natural whole-grain or enriched or restored for vitamins and minerals to whole-grain values), undertaken jointly by THE CREAM OF WHEAT CORP. ... GENERAL FOODS CORP. ... GENERAL MILLS, INC. ... KELLOGG COMPANY ... NATIONAL BISCUIT COMPANY ... PILLSBURY FLOUR MILLS COMPANY ... THE QUAKER OATS COMPANY ... CAMPBELL CEREAL CO. ... ALBERS MILLING CO.

How a home-front army suffers heavy casualties

LAST YEAR, twice as many Americans lost their lives in accidents in their homes as were reported killed in battle in the first 18 months of this war!

In the same year, *well over three quarters of a million* workers were temporarily disabled by accidents in their homes.

The working time lost by this huge Home-Front army was enough to operate more than 50 war plants, each employing 1000 people, for an entire year.

Most home accidents need not happen. Today, especially, it is your responsibility and that of your family to help reduce the number of such accidents.

The practice of the three basic safety principles outlined below would eliminate most of them.

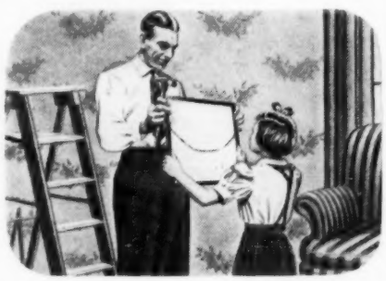
Remove danger points. Keep stairs, including railings, in repair and well-lighted . . . *a greater number of serious accidents occur on stairs than in any room.*

Have electrical equipment, irons, heaters, toasters, etc., inspected and repaired. Replace frayed cords and loose plugs. Watch out for leaks in gas appliances and pipes. Clean chimney flues and heating equipment regularly.

Practice good housekeeping. Stairs and landings should be kept free of brooms, toys, boxes, and other objects which might cause falls. Scatter rugs should be securely anchored.

Tie back kitchen curtains so they won't catch fire. Knives and sharp instruments should be kept in a safe place when not in use . . . handles of pots and pans on the stove should be turned in to avoid tipping.

Keep furniture and other objects out of the way so you won't trip or stumble over them.



Develop careful habits. Use a stepladder, or a straight, strong chair—not the nearest rocker or box—when reaching to high places.

Careful householders will disconnect electric appliances like irons and curlers before leaving the room. They will never leave a hearth fire, whether gas, wood, or coal, unguarded.

Close cupboard doors and bureau drawers promptly to avoid collision. Get rid of broken glass or other sharp refuse as quickly as possible.

Hands should be dry when touching any electrical switch or apparatus.

Make a tour of your home this very day.

Check for yourself, and urge your family, especially the children, to see that these three basic safety principles are consistently carried out. Don't give an accident a chance to happen!

On request, Metropolitan will send you a free folder, 113-Z, entitled, "Home Defense Against Accidents."

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The Food We Eat

(Continued from page 804)

Periodic starvation is a useless, exploded notion and has no place in the care and conditioning of Grandfather and Grandmother. First, a good, substantial breakfast with eggs or other protein and other foods according to weight and activity. Prejudices against dark breads should be forgotten, as whole wheat grains should furnish much of the carbohydrate intake, with potatoes the next best source of starch. Overrefinements of starch and excessive uses of sugar are taboo. Overweighters should fill up on fruits, and vegetables, and it is the cook's job to make them so interesting that eating them will not be a chore. Fats, while important food items, should be taken sparingly, their caloric value to represent only about one tenth of the total daily caloric intake. Both middle and older aged people will do well to go slow on egg yolks, cream, butter and other animal fats if their body build, family history or other indications suggest heart disease, especially with thrombosis.

Protein is the most important food essential, with a daily requirement of slightly less than half a gram for each pound of body weight. Cheese is probably the oldster's best calcium source, an important consideration, since the prevalence of false teeth and the often fatal hip fracture indicate that most older people require more calcium. While milk is usually the best source of calcium, older people do not need its fat and skimmed milk is apt to be constipating if taken in large amounts. So cheese, with plenty of vegetables, seems the best solution.

Citrus fruits in most cases will control bleeding gums. Food losses caused by poor teeth, partial failure of stomach juices, vitamin storage and poorer absorptive powers may be compensated with additional vitamins, iron, calcium, hydrochloric acid and a carefully balanced diet. Tea, coffee and alcohol may be useful. Older people often forget to drink enough water. Tea and coffee are preferable to cocoa and help the body retain its fluid balance. Fruit juices help supply needed vitamins. Condiments, broths and relishes, while so-called "useless foods," have a place in

stimulating the waning appetites of age. Tobacco is said to be safer after 60 because the blood vessels are less elastic. The best dietary differs with locality, individual, routine and special circumstances. Fortunately, Nature has distributed a great variety of food sources throughout the country and the world, so that adequate diets may be developed almost anywhere.

Grandfather and Grandmother should consult their physicians regularly and ask dietary advice, not failing to remember that diets prescribed for special conditions may need corresponding changes as the condition changes. A fair number of oldsters will need surgical care at some time, this supposedly being one of Nature's penalties for added years. But with good care, if the condition has not progressed too far, the oldster's chances for recovery are good.

The belief that "man is as old as his arteries" does not hold true; medical records prove that many in the prime of life die from small blood clots while others far older appear hale and hearty "with most of their arteries laid down in concrete." The exact connection between heart disease and food habits must also await the future for solution. In general, the cook will have more trouble with Grandmother than with Grandfather. Dorothy Dix once said that "women seem either to become skeletons or feather pillows," and it is this tendency toward extremes which makes it harder to keep women's diet on an even keel. Ration points, and the rushing and worrying which attend today's living make it harder to maintain the social and spiritual benefits gained through sharing food. But we shall do well to remember the important civilizing influences of religious and national family feasting and hospitality. Edwin Markham spoke truly when he analyzed man's primary needs as bread, brotherhood and beauty.

Well fed babies and children grow faster, and nutritional advances of the last fifty years probably account for the fact that our boys today are 6 per cent to 8 per cent taller and 12 per cent to 15 per cent heavier than American boys were in 1898. But despite such optimistic signs, many problems indicate that the American home has not kept pace with the scientist, especially in feeding children of the lower grade and high school years. For example, there is the prevalence of tooth decay, rampant during adolescent years and so far-reaching that 20 per cent of the first draft could not qualify because of inadequate teeth. While part of the problem, especially among our teen age girls, is a desire to be slim, several factors are involved.

One of these factors is a failure to realize that children need extra vitamin D, not only in infancy but throughout the period of growth. Many fail to get enough sunshine in the summer, and few get enough during the winter. Milk is the best constant, good source of calcium and should be taken to the amount of 1 pint daily in addition to the usual diet by those in the early preschool group. The requirement quickly increases to 1½ pints and so remains until the age of 10; 1 quart daily is needed throughout adolescence. Failure to get their milk quota means not only calcium deficiency but protein hunger as well for most children. Size and weight are not good indications as to whether or not a child gets enough protein. Such determinations can be made only by careful laboratory studies. Meat, especially the glandular organs and lean pork, give children needed B vitamins, while enriched flour and breads also aid Junior in building a substantial nutritional basis.

Refined cereal preparations, unless enriched, are not for Junior. Neither are large amounts of sugar, and at least one authority says that if a child often asks for sweets, his diet is deficient. This authority says that the amount of sugar a child takes voluntarily indicates whether or not he gets the proper foods; the better the diet the less the child craves sweets.

I-R-O-N SPELLS RED BLOOD
By HELEN RIDLEY
A practical, sensible article discussing the common food sources of needed iron for building blood. Coming in an early issue of *Hygeia*.

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HELP WIN THE WAR by conserving rubber. Use a separate nipple for each feeding. Clean immediately after use. Avoid excessive boiling.

HYGEIA
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Human milk is Junior's best food in infancy, containing (according to his mother's diet) about three times as much iron as cow's milk and more of vitamins A, C and B_1. Other and related advantages are that babies fed human milk have fewer cases of rickets, digest their food more easily and are relatively free from infections; too, they have good growth and general condition, few serious illnesses and an easily regulated diet.

Dr. Philip C. Jeans of the State University of Iowa department of pediatrics urges the early administration of vitamins D and C. Vitamin D is given during the early days of life by a teaspoonful of low potency or one-half teaspoonful of high potency cod liver oil, or 4 to 5 drops of viosterol. • Dr. Jeans questions the large amounts often given and says that when this is persisted in over a period of months (for example, 2 to 3 teaspoonfuls daily of high potency oil giving 1,800 and 2,700 units of vitamin D, respectively) the appetite may decrease and with it the growth rate and calcium utilization. Vitamin C is given, starting with an ounce of orange juice and increasing the amount until the baby is getting 2 or more ounces at 3 months of age. Ascorbic acid tablets may replace orange juice for the few babies who do not tolerate it or if oranges are not available.

All babies need food containing iron and the B vitamins. They also need to get used to a variety in flavor and texture as the child who has only liquids and sieved foods throughout the first year often refuses coarser foods later. Sieved vegetables should be started around the fourth to fifth month; sieved fruits the fourth to sixth month, and some chopped or mashed vegetables should be given after the sixth to seventh month. Something is wrong if bottle feeding goes beyond the first year. Egg yolk, preferably cooked, is often given by the third to the fourth month. Among natural foods, the known needs of the infant are better served by egg yolks, vegetables and fruits than from whole wheat cereals, although certain fortified proprietary cereals may be important aids in giving Junior his needed iron, vitamin B and other food factors. These suggestions pertain of course to the normal, full term baby. The premature or sick infant requires individual dietary recommendations.

Professors E. V. McCollum and Maurice Shils of Johns Hopkins University have studied various minerals found in human tissues. These range from calcium, which makes up about 2 per cent of our adult body weight, down to minerals of which but minute traces are found. At least twenty of these "trace elements," as they are called, other than copper, iron and iodine appear in animal tissues and milk. Of these, only manganese, cobalt and zinc are known to be essential, and the exact requirements for these are not known. But as these and other minerals make up part of our bodies, there is some possibility that people may suffer from a deficiency of any one of them. While waiting for future discoveries to clarify the matter and determine which minerals and how much of each we need, our best safeguard is to eat a well balanced diet which will give plenty of the known food essentials and probably enough of the undetermined factors too.

Now—Whole-Grain Nourishment of Wheat, plus Bran Benefits!

Cereals—whole-grain, enriched, or restored—rate high in our government's nutrition program. They're included in Group 6 of this "Basic 7" Nutrition plan.

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In addition, Post's Bran Flakes are a mild cereal regulative. They provide enough extra bran to help prevent constipation due to lack of bulk in the diet.

A Product of General Foods

LEARNING TO LIKE MILK

By THURMAN B. RICE

Cy La Tour

Growing children need up to a quart of milk a day. Most children like milk, but there are ways of meeting this nutritional need even for those who don't

WE ARE TOLD that milk is the best of all foods. Well, it *should* be—because it is the only food especially prepared by Nature herself to serve as a balanced ration. Every needed food ingredient is present in milk, though to be sure it is inclined to be a bit short on vitamin D (it was evidently intended that calves should live out in the sunlight), and as a food for adults it is low in iron and roughage.

Since milk is such a valuable food, we should use more of it. It is readily available, not at all expensive and in most places can be obtained in a safe and sanitary condition. There is no doubt whatever that it is of great value to growing children, undernourished persons of all ages, persons suffering from tuberculosis, nephritis, gastric and duodenal ulcer, colitis, exhaustion, mania and a great many other conditions. Indeed, it is said that physicians prescribe milk oftener than they do any drug, though it would be hard to check such a statement. In spite of its many advantages, every practicing physician is familiar with the sinking sensation which he so often experiences when he advises an invalid to drink a great deal of milk. "But I don't like milk," naively replies the patient. Then the physician knows that there is trouble ahead. In such cases milk is badly needed, yet it will be difficult to induce the patient to drink milk, as he has not learned to like it before becoming ill. Furthermore, at such a time food that one *likes* is much better for him than food that he detests. It would be a lot better if he had learned to like it when he was well. How can one learn to like a food when he has no appetite or at best a poor one? Every child should be taught to *like* milk if that is possible, and every adult should do his best to develop in himself a real liking for this best of all foods.

Why is it that so many people—children and adults—do not like milk? There are several reasons. Fortunately, they permit a rather accurate classification.

First, there are the psychologic reasons. Children, for example, want nothing so much as to be grown up or at least to appear grown up. They want to get out of their baby ways and be like the adult people about them. They observe that the baby is given milk, while father, mother and the older people have coffee, tea and various sorts of bottled drinks, soft and hard. What is more natural than that imitative children should want the same? If Mother and Father want Junior or Sister to drink milk, they will have done more than anything else to help if they will set the example which is not only the best teaching but almost the only effective teaching. Fortunately, milk is nearly as good for adults as it is for children. Such a program of milk endorsement, then, literally serves two excellent nutritive purposes, one for the child and one for the parent.

The usual practice is to urge or compel the child to drink milk while parents at the same table have something which seems to the child much more exciting and attractive. "Now drink your milk," is probably the most frequently used sentence at the American table. "You can't have any dessert if you don't drink your milk." In this way the child comes to feel that milk is a burden, and he looks forward to the day when he can give up such childish things. He can hardly wait for the

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time when the glass of milk at his plate will cease to remind him of his youth and childishness and when he can eat in peace. Parents should understand and teach the child to understand the principle that milk is a great privilege; they should carefully avoid making it a burdensome duty.

Many adults dislike milk because it reminds them of the days back on the farm when they had to get up in the small hours of the morning to milk the cows. An old-time cow barn at 5 a. m. during the winter months was hardly a place of luxury and was scarcely better on a hot summer evening when the flies were bad. The odor, the dirt and the unpleasant experiences which so many country boys and girls have had in taking care of cows and milk have been likely to cause such persons later in life to say, "I've seen too much milk, and pailed too many cows in my time to care for milk."

These people need to visit a modern dairy and see how different everything is nowadays. They will see light, well ventilated barns—almost as clean as a house where human beings dwell. The milk is usually drawn by machines after the cows' udders have been washed. It is cooled immediately, transported in clean cans or glass-lined tanks, pasteurized, bottled and handled in such a way that it is as clean as any food we eat and indeed cleaner than most. People who are inclined to be more than usually critical of milk can reassure themselves by getting nursery or Grade A milk for their own use. In this way they can do much to overcome their aversion to milk as they have known it in the past. These people should also know something of the care which is now taken to make sure that milch cows are free of disease and fed carefully balanced rations. As a rule, cows today are treated as though they were privileged and important characters—as indeed they deserve to be treated, because the cow has in a true sense become the "foster mother" of a large part of our population.

Actually, the dairy industry has become one of the most important in the United States. Cattle are carefully bred for this milk-producing purpose, and everything has been worked out with great care and precision. Dairy equipment is a marvel of ingenuity and exact-

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Yet the cost of these Baking Soda brands is low—just a few cents for a package that will go a long way. Keep a reserve supply of Arm & Hammer, or Cow Brand, Baking Soda in your home. It will serve you well in many an emergency.

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ness. University courses in scientific dairy methods are given by all the large institutions in areas where such courses might be expected to be offered. With this splendid background, our would-be milk drinker need have little fear.

A great many adults are afraid to drink milk because they suppose it to be fattening. The fact of the matter is that milk is not fattening when properly used. Indeed, it can easily be used as a means of reducing—and a safe way, at that. Milk will help to put flesh on a poor, emaciated, sick person because it gives him almost everything he needs and also because he is usually in bed, or at least quiet. Milk contains only 600 calories to the quart, which means that it would require about five quarts a day merely to maintain nutrition, and considerably more to fatten one. One should remember that farmers give milk to pigs to make them grow. When it is desired to fatten them, much more concentrated food is used. No, milk is not fattening, so our careful eater may indulge without fear for his or her figure. If he should wish to reduce a bit, a glass of skimmed milk (milk with top cream poured off) or buttermilk a half-hour before meals will not only assist in maintaining a balanced ration but also will greatly assist in curbing an appetite which might tend to induce overeating.

Second, many people say that they do not like the taste of milk and will not drink it for that reason. Actually, milk has very little taste. What is commonly regarded as taste is really odor, as can be proved by the fact that cold milk drunk through a straw with the nostrils closed has only a slightly sweet taste. The odor of milk is determined by the state of health of the cow, the food she has eaten and the care that the milk has been given. Modern dairymen are careful about these matters, and there is less cause for offense today than was formerly the case. If the milk is cold and drunk through a straw without breathing, there need be little difficulty about taste.

The commonest complaint is that milk tastes flat. So do meat, egg, vegetables and a great majority of foods until they are salted. Why not salt milk—as a great many persons do—or, better yet, drink milk as one eats salted soda crackers? As a matter of fact, it is much better

The Newer Concepts of Meat in Nutrition

Meat . . .

War . . . and the Three Basic Nutrients

THROUGHOUT the recorded history of man war has meant destruction and starvation. It speaks well for American civilization and advancement that history is not permitted to repeat itself here. Careful planning and a united effort, shared by government, agriculture, and the food processing industries, not only maintain an adequate standard of civilian nutrition, but also provide an heretofore unbelievable wealth of food for our armed forces. In addition, America assumes cheerfully a goodly part of the burden of feeding our allies and the peoples of liberated countries.

While vitamins and minerals of course are nutritionally important, basically nutrition depends on proteins, fats, and carbohydrates.

The bulk of our body substance is made up of proteins, and proteins are needed to replace the tissues used up in the process of living. They also are needed to build the new tissues in growth. Fats provide the unsaturated fatty acids by many authorities considered to be essential in nutrition, and furnish energy. Carbohydrates supply the food energy needed for the processes of living and the work we are called upon to do.

Carbohydrates are supplied by sugars and starchy foods, especially grain foods. For their energy value all carbohydrate foods are alike, no single such food or group of them can claim superiority.

Fats, however, are not all alike; not all of them contain the unsaturated fatty acids or the same amounts of them. Pork and lard are among the richest sources.

Proteins also differ. Not all proteins are utilized to the same extent by the body. The proteins in foods of animal origin, generally speaking, are utilized to a much greater extent than those in foods of plant origin. Thus there are two points of importance in protein foods; first, the percentage of protein they contain; second, biologic value, the extent to which the body can use their proteins.

Meat, regardless of cut or kind, ranks in the forefront of protein foods, not merely because it is so rich in protein (from 25% to 35% after cooking), but mainly because its protein is of highest quality, complete in that it contains all the indispensable amino acids, and is utilized by the body in such a high degree.

To do your share in America's effort for adequate civilian nutrition, plan your meals wisely. Remember, all meats supply the essential complete protein needed, and even a small amount lends your meal a unique appetite appeal which few—if any—other foods can give it.

The Seal of Acceptance denotes that the nutritional statements made in this advertisement are acceptable to the Council on Foods and Nutrition of the American Medical Association.

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to eat milk in this way, because the particles of cracker break up the heavy curd which sometimes presents difficulty in digestion. Some like to add a bit of sugar to milk before drinking it. A great many flavoring agents can be used, because milk readily takes on the taste of other things. This is one of the principal reasons why people who like milk never tire of it in reasonable amounts. In this respect, it is like bread. The combinations in which bread or milk can be used are almost countless. Any cook will confirm the fact that it is hard to cook without milk, because it can be used in so many ways. In all these ways it loses its identity as milk and becomes a part of the dish in which it is used.

Let us suppose that a person does not like the taste of milk but needs the nourishment. Chocolate in some form can be added—hot chocolate or cocoa made with milk, or a malted milk flavored with chocolate. A number of such drinks can be had at any soda fountain. Cherry milk or pineapple milk can be made by adding the corresponding fountain syrup. Fruit juices, if not too acid, serve well. A delicious preparation is a glass of milk mixed half and half with applesauce made from some bland apple such as Grimes Golden or Stayman Winesap. The sauce should be passed through a colander and stirred up with a milk to the consistency of a thick soup. Cinnamon, nutmeg and vanilla or lemon extract also blend well with milk. Of course, every one is familiar with milk as used over breakfast foods. They should also learn to drink it with bread, crackers, graham crackers, doughnuts, apple pie, cookies of various kinds and in all the other food combinations.

Nearly every one likes ice cream—said to be the most characteristic of American foods. Ice cream is really a sound and substantial food as well as a dainty treat. It is essentially milk which is cold, sweetened, flavored and eaten with a spoon. Here, then, is a tip for those who want to learn to like milk. Drink it cold, sweet (if you like it sweet) and flavored with something.

Some readers will object, saying, "But I like milk as it is." Splendid! Then drink it that way. These paragraphs are for those who do not like it as it is and are trying to learn to like it, or at least to get outside of enough milk to give a real boost to nourishment. Are the various modified forms of milk as wholesome as is the plain, untreated variety? For the most part they are just as good. Chocolate milk drinks sold by dairies are usually made from skimmed milk, because the cream may cause trouble otherwise. Some of these drinks are sweeter than they need be, perhaps, but the best part of the milk is still there, and that is the main point. Perhaps it is better to switch to ordinary milk as soon as convenient, because it is so much more generally available, but any sort of milk drink is valuable provided it is clean.

With ingenuity, a child can be induced to take a quart of milk a day—and yet never drink a drop of it, as such, from a glass! At breakfast, omelette (eggs and milk), cocoa made with milk and cereals eaten with milk are excellent. Several cereals can even be cooked in milk—a really delicious way to prepare cream of wheat and similar breakfast foods. For lunch, some form of malted or chocolate drink can be used; custard and butterscotch puddings or pies can be rich in milk. Cream over fruit is universally liked. At dinner, creamed peas, creamed soups or chowder, scalloped potatoes, cheese of some sort, ice cream or sherbet are all delicious. It's true that this takes ingenuity and somewhat more effort than it does merely to pour a glass of milk, but it will get results and will make it unnecessary to nag the children.

Third, there are those who say that they like milk well enough but find that it "doesn't like them," by which they mean that it causes bloating, indigestion, constipation or other unpleasant symptoms. These complaints can nearly always be remedied unless one is allergic to milk.

The commonest complaint is that bloating results after milk is taken. In order to understand this condition it is necessary to look into the cause. As we do so, the remedy is at once suggested, and it really works. One of the most important functions of the gastric juice is the sterilization of the stomach contents. This is brought about by the action of hydrochloric acid in the gastric juice. Human milk does not

have a heavy curd, requires relatively little gastric acidity. Cow's milk, however, is much heavier and absorbs the gastric acid as a sponge takes up water. As a result, it may be that the acid is all used up before the stomach contents are sterilized, if there is much milk in the stomach. When this happens, germs in the stomach and its contents grow, and as they do so evolve gas which collects in the upper portion of the stomach and causes a false sense of fullness—bloating. The individual is uncomfortable and belches a great deal. His appetite for other food is spoiled, and he does not eat as much food as he really needs.

What can be done about such a situation? There are several remedies. For example, one can take a few drops of hydrochloric acid in a glass of water, though this is rarely convenient. Or, one may eat some acid food or fruit juice. Such a practice was formerly considered unwise, but this old view is now known to be absurd. The dictum, "Give the baby orange juice and also give him milk, but never give him orange juice and milk at the same time," is definitely outmoded. Babies are now generally given some acidulated milk and do much better on such a modified milk than they formerly did with natural cow's milk. A good way for adults to insure the digestibility of milk is to take milk which has already acidified itself and is ready for digestion. For this purpose cultured buttermilk is ideal. This is simply a product which is somewhat too old to be sold as fresh milk. Most of the cream is removed, the milk is then pasteurized at a high temperature, cooled and deliberately inoculated with a harmless strain of bacteria which change the milk sugar, or lactose, into lactic acid. Such soured milk requires little acid in the gastric juice, because it has its own acid. The lactose in the milk has already been changed to lactic acid, and there is no longer the possibility that it will ferment with the production of gas which would cause bloating. Buttermilk is not as nutritious as whole milk, but it is still an excellent food—particularly for adults, for whom it usually exerts a laxative effect. Other forms of milk may be used in this same way—cottage cheese, "bulgaricus" milk or "acidophilus" milk when these are available. Many invalids will find

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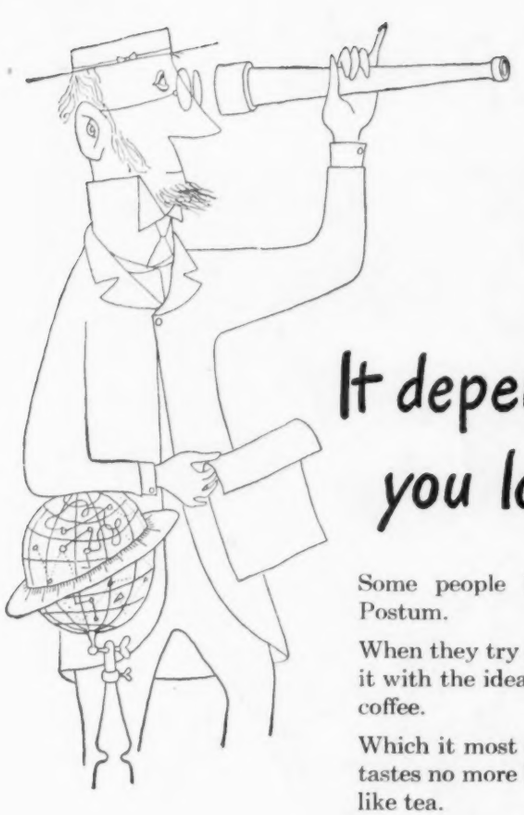

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POSTUM

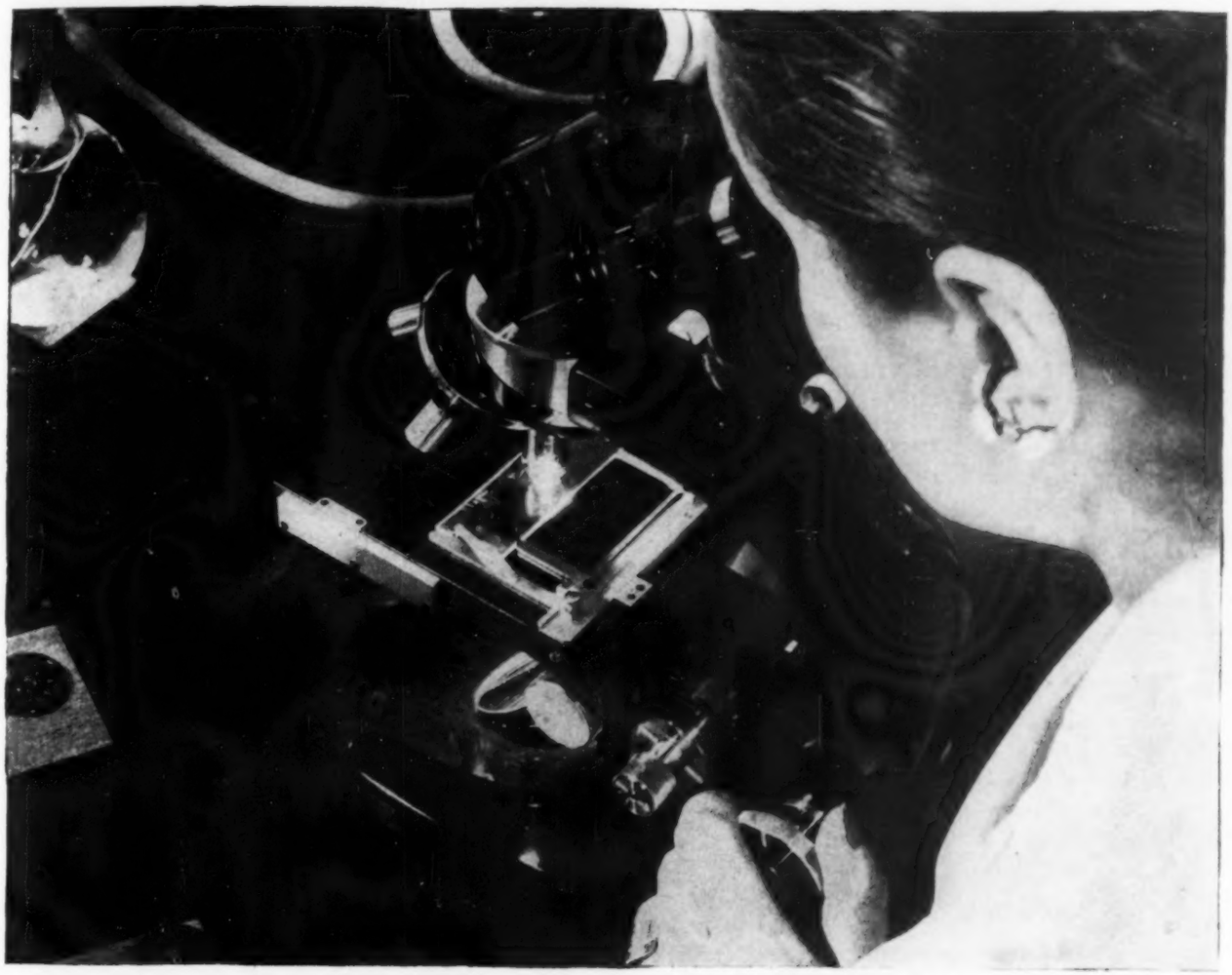
One of America's great mealtime drinks

acidulated milk as prepared for babies to be easily digested and excellent in every way. When acidulated with acid fruit juices, it can be made very palatable. The amount of acid used should be barely under the amount which causes curdling. If the milk is cold when mixed slowly with the acid, the curdling will be held to a minimum. It must be remembered that curdling does not in the least injure the milk as food, but it does render it somewhat less attractive in appearance.

A great many people suppose that milk is constipating. Particularly, they insist that cheese is also. Whether we are to regard milk as constipating or not depends on our concept of what constipation is. Milk has no residue, and if milk alone were used as food the bowel contents would accumulate very slowly and a bowel movement would be needed only at relatively long intervals. Furthermore, due to its bland, smooth nature milk does not actively stimulate the bowel; thus a lazy or atonic bowel might easily get even more lazy and atonic. In the infant, Nature has made adjustments for such an arrangement, but in the adult there may be some difficulty unless roughage of some sort is taken. The milk itself will not cause trouble, but the individual may easily become concerned and begin to take measures which may do harm. Actually, in cases of spastic constipation or irritated colon, milk is often prescribed just because it is so bland and has so little residue. In such cases we find milk being used as the remedy for the worst form of constipation; it could hardly be the logical cause of constipation. Sour milk products are useful in many forms of constipation and intestinal stasis or putrefaction.

Fourth, there are a few persons for whom milk is really a food to be avoided. This is because they are allergic to the proteins in milk. There is little that can be done about it except to avoid such products. These people show eczema or hives after drinking milk. Occasionally, they become asthmatic or have colicky pains. Sometimes it will help if the milk is boiled, but on the other hand, boiled milk may be worse than fresh milk.

When this condition is observed, it is usually better simply to avoid



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H-11-43

milk, or at least to attempt to do so. Possibly small, but never large amounts of milk, can be used. Sometimes the individual can be desensitized, but there is an element of danger in this and it should never be attempted except under the care of a competent allergist. The use of protein digestive aids, such as certain enzymes, may be prescribed by a physician. These may help to get the digestion of milk beyond the stage at which it gives reaction. Sour milk products are somewhat less likely to cause trouble than is sweet milk.

When a child is found to be allergic to milk, it is up to the physician and the parents to find something which will take the place of this natural food. Fruit, vegetable and meat juices should be tried. In some instances eggs can be substituted. The use of the milk of some other animal than the cow is a hopeful procedure and will sometimes succeed. Recently, human milk depots have been organized in many large cities. The milk of mothers is frozen or dried under vacuum and can be shipped long distances. Human beings are rarely allergic to human milk. This milk is of course rather expensive but is wonderful for certain invalid adults as well as babies.

Persons, particularly babies, who cannot drink milk should be given small amounts of milk sugar. If they do not react to it, the amount can be increased. There is a good reason for their having this special kind of sugar, because when it is digested it gives up another form of sugar known as galactose. This product is needed in the development of the nerve sheaths of the body and is found in no food except milk or milk sugar. It must be remembered that some persons allergic to milk may react even to the little bit of milk protein left in the lactose.

Fifth, really good milk may not be available, and in such a case it is no more than right that people should avoid the use of milk. If there is any possibility that the local supply can be improved or cleaned up, this should be done by all means, because there is no more important commercial commodity in any community. There are few communities in the United States—villages, towns or cities—which cannot have good milk if they will take the trouble to get it.

A recent national survey shows that a high percentage of mothers do not realize *that the immunization of children against contagious diseases should start when they are* babies—*3 months old.*

"THE BABY'S MOTHER IS BESIDE HERSELF"

"She blames herself because he was not immunized months ago!"

Most mothers think it is safe to *put off* immunizing their children against contagious disease 'till there's an epidemic,' 'till they're exposed' or 'till they go to school.'

Yet *little* children—under 5—are the ones who suffer the highest death rate from diphtheria . . . and one of the biggest causes of baby deaths under one year is whooping cough.

Doctors say the importance of *early* immunization cannot be overemphasized. So don't wait a single day. If your baby is 3 months or older, and has not been immunized—see your doctor *now.*

THESE ARE THE AGES *when your child should be protected . . .*

3 to 12 months is the right age for *smallpox* protection. In no case let this go beyond the first year.

6 to 9 months is the right age for immunization from *whooping cough* and from *diphtheria.* In modern practice *tetanus* immunization is often combined with the diphtheria inoculation.

If your child has not had his tetanus inoculation, your physician will probably want to immunize immediately in case of wounds or punctures contaminated by rust or dirt.

After 18 months immunization for *scarlet fever* should always be considered if the "Dick Test" shows that your child is not naturally immune.

At 6 years or over. Immunization against *smallpox* and *diphtheria* begins to wear off after about 5 years. So at 6 years you should have your child re-vaccinated for smallpox and given the "Schick Test" to find out if he is still immune to diphtheria. Ask your physician then about protection from *scarlet fever* and *typhoid.*

At 12 years. You should have your child vaccinated again for *smallpox* and Schick-tested again for *diphtheria.* Consult with your doctor again about *scarlet fever* and *typhoid.*

Important for all ages—If your child did not receive the protection he should have had at an earlier age, see your physician immediately and have him immunized *now.* You will protect your child only if you keep his immunization up to date.

Keep your Child's Record

Ask your doctor for this free reminder card. It will keep the record of your child's immunization and remind you when to take your child back to the doctor.

These cards may be secured from Sharp & Dohme by all physicians, on request. A folder discussing immunization is also available upon request to interested individuals or groups. Write to Sharp & Dohme, Dept. No. 11, Philadelphia 1, Pa.

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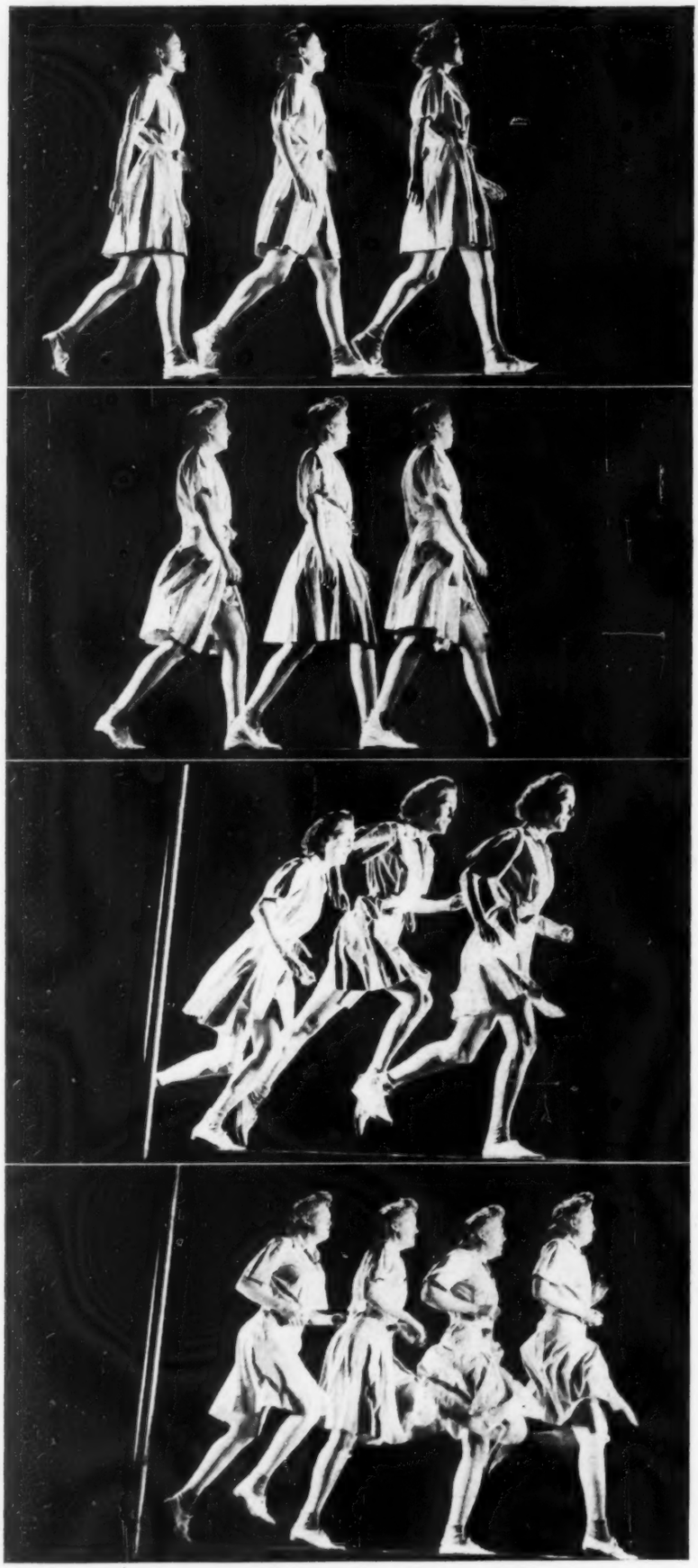


PHYSICAL TRAINING IN THE WAC

(Continued from page 787)

EVERYDAY POSTURE POINTS

Do you salute this way (opposite page, top)? If so, snap out of it. This is bad military form, and it is bad posture. When you salute, bring your hand to your forehead—not your forehead to your hand. Relax. Don't stiffen or arch your back. Don't throw out your hips.

WALKING: Movement starts at hips, not knees. Hold the upper body and head at right angles to the ground. Swing arms freely. Keep eyes off the ground. Point toes straight ahead. Heels touch the ground first. Transfer weight forward toward the outer borders of feet and push off with the toes. Grasp with toes for balance. Don't hold body and head at an awkward angle (below). Avoid swaying hips from side to side. Don't lock knees.

RUNNING: Bend forward slightly from the waist. Bend elbows slightly and clench hands lightly. Legs reach out directly to the front. Push off with the toes and vigorously extend back leg to assist forward motion. Don't hold body too erect (below). Keep legs from moving up and down and covering very little space. Avoid kicking feet up behind you. Note how woman below requires four distinct motions to move over the ground covered by the woman above in three.

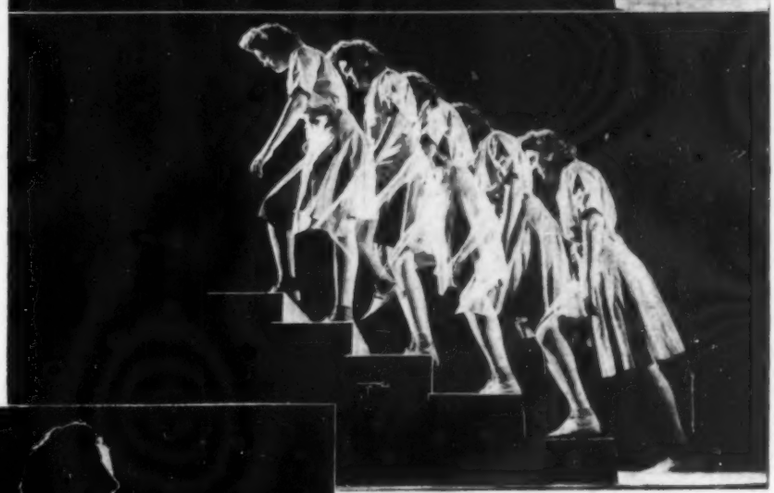
Do you stand at Parade Rest this way (opposite page, bottom)? If so, check up. This woman has snapped her knees back and locked them. Her hips serve as a shelf to rest her hands. This is bad posture and bad military form. Parade Rest is simply good standing posture, with the feet in stride position, and the hands held easily, comfortably behind the back.

How do you climb stairs? The right way is shown on the opposite page. This woman keeps her body

erect. She places her foot on the step and straightens the knee to lift her body. She swings the opposite leg into position on the next step. Arms swing naturally. She raises herself by leg action, assisting her upward movement by a vigorous thrust of the toes.

Below, a woman climbs stairs the hard way. Knees are continually bent. Her trunk leans forward. She comes down flat-footedly on each step.

Watch these and other everyday posture points. The Army will judge you by your appearance. A smart, soldierly carriage usually means smart, soldierly performance.



CHECK YOUR POSTURE

The plumb line test for posture has been mentioned before. Try your knowledge on this figure (left). Use your knowledge on the woman next to you in ranks. Try it on yourself in front of a mirror. Stiff posture is not good posture. Good military posture is no different from good civilian posture.

HEAD BALANCED AND ERECT

CHEST HELD HIGH

BACK STRAIGHT

ABDOMEN IN

HIPS DO NOT PROTRUDE

KNEES STRAIGHT BUT NOT STIFF

WEIGHT TOWARD OUTER BORDERS OF FEET

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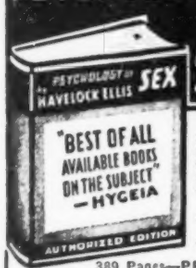

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QUESTIONS AND ANSWERS

Ultraviolet Lights for Classrooms

To the Editor:—A question has arisen in our school system regarding the advisability of installing ultraviolet lighting fixtures in some classrooms, as an aid in preventing the transmission of communicable disease—particularly measles. I would appreciate information on the advisability and practicability of installing this equipment in a regular classroom at this stage of our knowledge regarding their value.

C. S., Nebraska.

Answer.—The Council on Physical Therapy of the American Medical Association limits its acceptance of ultraviolet lamps as disinfecting agents to installations in hospital nurseries, hospital wards and operating rooms. The Council says: "Ultraviolet lamps for disinfecting purposes are not accepted for disinfecting air in schools, waiting rooms, public gathering places and large halls. The evidence now available does not indicate that the incidence of colds can be reduced by the installation of ultraviolet lamps and by the irradiation of an enclosure occupied by people."

It is worth realizing, moreover, that a child spends only a limited number of hours in classrooms. Outside the classroom, he mingles with others in school corridors, toilet rooms, cafeterias, on the school grounds, on the way to and from school, in buses, street cars, motion pictures, department stores and numerous other places.

It seems unlikely, then, that putting any kind of radiation device, no matter how effective, in the schoolroom could have any appreciable effect on an epidemic of measles. The opinion of most epidemiologists and health officers is that efforts to control measles epidemics should be directed toward protecting the weak, the sick and the young from contact with the disease, and that school funds were better spent in obtaining adequate and competent professional supervision of children—that is, in providing school doctors and nurses and training teachers in the observation of children to detect the early signs of communicable disease.

Smallpox

To the Editor:—Is it possible to get smallpox after being vaccinated?

M. Z., Illinois.

Answer.—It is possible to get smallpox after being vaccinated but this happens seldom. Usually, those who get smallpox after being vaccinated are those who have been exposed to smallpox and then get vaccinated as a hope of avoiding the disease. Such vaccinations are often too late, especially since vaccination may be delayed for several days after exposure.

Other instances are those in which smallpox occurs many years after the vaccination.

It is not wise to wait until one has been exposed to smallpox to be vaccinated. Neither is it wise to let too much time elapse between vaccinations. Vaccination is usually recommended for babies between the eighth and tenth months of life. Revaccination should then follow on entrance into grade school, and again at the beginning of high school.

If you have a question relating to health, write to "Questions and Answers," HYGEIA, enclosing a three-cent stamp. Questions are submitted to recognized authorities in the several branches of medicine. Diagnoses in individual cases are not attempted nor is treatment prescribed. Anonymous letters are ignored.

TRAINING NURSES FOR WAR

(Continued from page 789)

out a trace of hysteria or fright, and took it as "just another phase of our training." Showered with dirt and debris, they laughed good naturedly and joked about their hair-dos and shampoos.

All newly recruited Army nurses in the Sixth Service Command, including Michigan, Illinois and Wisconsin, are sent to Camp McCoy, Wis., for a two months' course highlighted by sky-defense drill. Nearly one hundred nurses, leading a marching column of medical officers and enlisted men on a five mile hike along a road through pine trees in August, were sent scattered into the brush as harmless "bombs" or sacks of flour were let loose from planes flashing overhead. This was gas-defense practice, too, so all put on their gas masks in a matter of seconds.

"We derive tremendous benefit from this sort of training," commented Col. D. L. Robeson, commanding officer of the hospital, who was on the hike. "It makes everybody realize the necessity for realistic training. One bomb hit so close to me it would have finished me if it had been the real thing," Col. Robeson said.

The Desert Training Center, where nearly 200,000 troops are being put through their final hardening for the fighting in Europe and Asia, has hospitals located at Yuma, Ariz., and at Needles and other points in California. In spite of this being one of the most difficult terrains in the country, the nurses have come through their maneuvers with flying colors. Major Nola G. Forrest, Assistant Superintendent of Nurses in the center, points out that a nurse holds the speed record on the infiltration course at Camp Young—75 yards in seven minutes!

"In some of the extremely hot areas, it is necessary to have calisthenics very early in the morning, about 5:45," said Major Forrest. "The heat in the daytime frequently reaches 130 degrees; only low humidity makes living at all bearable. There is an endless waste of sand, sage brush and cactus, and in some spots rattlesnakes, coral snakes and other poisonous reptiles are present in large numbers. Black widow spiders, scorpions and the Gila monsters are also found in this area. Severe sand storms lasting from six to sixteen hours are not infrequent. The wind blows with such intensity that it seems as though small shots are being fired into one's skin. Tents blow down, and a thick layer of sand covers everything, so it is impossible to keep an immaculate looking hospital."

In the field hospitals, nurses live, work and eat in tents. Since these hospitals can be moved rapidly there are no fixed installations of showers, so the nurses bathe in large, galvanized wash tubs or other available receptacles. They wear coveralls, "G. I." shoes and helmets.

DRY GOODS DEPARTMENT

A trip downtown
Is a series of races
For the oasis
Of a drinking fountain.
Only a camel can hold more water
Than a small son or daughter.

—Virginia Brasier.

In one of these hospitals there is an ingenious surgical setup which is the invention of one of the doctors of the outfit. A collapsible framework fits inside the operating tent with walls made of white muslin to refract the light and keep the dust from the operating rooms. This forms two operating rooms, with a scrubroom in between, and the entire apparatus can be taken down or put up in eight minutes. The nurses are all proud of their hospitals.

From the American School Center in England comes the story of thirty chief nurses from American military hospitals in the British Isles who have been getting almost everything in a soldier's basic training. The school is supervised by Lieutenant Ruth Momberger of Baltimore, but most of the classes are given by regular instructors of the center or by medical officers versed in the special subjects being taught. At a class in fire fighting they watch while the use of stirrup pumps, foam extinguishers and other apparatus is demonstrated, then they try out the procedures themselves. They do foot drill and keep in practice by marching in formation to and from all classes.

It is the plan of the service commands to give the nurses physical hardening programs before they go overseas. Nurses for evacuation and field units are expected to take 176 hours of training. In addition to close order drill, marching and carrying packs, they learn military customs, etiquette and courtesy, get a better understanding of their part in the military machine. They learn the technic of nursing in a military hospital with its routine procedures. They listen to lectures on how to protect themselves from chemical warfare, from air, paratroop and mechanized attacks. They hear lectures on water contamination and the use of medicines in the tropics, on how to work under unfamiliar conditions.

One of the newest induction centers is in Chicago at the Chicago Beach Hotel on Lake Michigan. This center provides accommodations for 900 nurses and will maintain a 200 bed hospital. Other induction centers are being set up in the various service commands.

The nurse who wants to go overseas usually may get to go if she can pass the physical requirements, yet how quickly she may go will depend on circumstances. She may work in a hospital under military regulations for as long as a year before a notice is posted that there is a call for overseas nurses. Then perhaps ten will go at the same time from the same hospital.

There are various names for the intensive training given to mobile nursing units that will work near the front lines: "Commando Courses" or "Battle Schools" or "combat schools" describe the process by which nurses learn to put up and take down tents, dig slit trenches and fox holes, learn how to behave under strafing, and how to do all the things a good soldier needs to know.

Baby's First Three Months

Century Photos

There's a right and wrong way to give the baby his bath, and to do all the other things that need to be done for him.

By VICTORIA A. HINTON

MANY MOTHERS do not realize how important a daily schedule is for the new baby. One must work out a schedule and stick to it. It will cause a little confusion at first, but as every one in the household gets use to it, everything will be easier for the mother and baby. The mother must remember that she has a little infant whose life she must mold and train. Environment plays an important part in the life of an infant; as a mother, you must fit your schedule into your environment and your environment into your schedule, and you will be rewarded later on.

Usually babies are on a three hour schedule at the hospital, but on returning home, it is easier for the mother to build her schedule on a four hour basis. "Six, ten, two and six, ten, two" seems to be most convenient for the mother, although any hours may be considered when the four hour period is established.

BABY'S BATH

On the above schedule, you should plan to have the baby's bath come just before his 10 o'clock nursing or feeding in the morning. If you own or rent a baby scales, make a habit of weighing the baby just before his bath. Keep a notebook nearby so that you can record the weight, and as you watch it increase, you will see your baby gaining and growing from day to day and week to week.

In order to get the exact weight of the baby, keep a small pad on the scale, and adjust the scales to include the pad in the scale equipment. Then place the baby, nude, on the pad. This will keep the cold metal of the scales from chilling him and guard against any chance of his catching cold. Many mothers use little cotton blankets to wrap the baby after his bath, and the scales are adjusted to include the weight of one of these blankets in the equipment; in this case, the baby can be wrapped comfortably in the blanket and weighed that way.

An oil bath is given the little infant on its arrival home from the hospital. This is kept up for a month or six weeks. After that time, he is ready for the tub bath. Alternate the oil bath with the tub bath for a week to gradually get the baby used to the change.

If you use a bathinette for the tub bath, lower the baby into the water gradually, letting him know that everything is all right. A thermometer for the bath is valuable, and every mother should own one. With a thermometer, there is no guesswork; you can always keep the water at the same temperaure and never freeze nor scald the little fellow. A back rest is another valuable asset for the baby's bath; it gives support to the baby's back and keeps him from slipping, and in the beginning it is a support for you as you hold your left hand just back of his neck, shoulders and head. A baby can easily be frightened in his bath, so every precaution should be taken to see that he learns to love it and looks forward to it every morning.

Have within your reach, when giving the bath, two knit washcloths, a large bath towel for baby's use only, an undershirt, diaper and pins, and a cotton blanket. A bar of soap and a can of baby powder should also be within reach.

Use one washrag to wash the baby's face, and then soap it with a reliable baby soap and wash his head. Do not be afraid that you will hurt the soft spots, but do go over them gently. If the head is not washed thoroughly, he is liable to get "cradle cap." Wash well behind the ears—a place which is often neglected, where dirt readily accumulates. Take the other washrag, soap well and wash the lower parts and the rest of the body, not missing any of the folds of the legs or under the arms.

Now the baby is ready to be dried off. Pull the table part of your bathinette over the tub, cover it with your large baby towel and lay the baby down on his stomach. Cover him immediately with the bath towel and pat, do not rub him dry. Move your hand in a patting motion, but keep the towel still long enough to soak up the water. The baby will usually hold his head up, so be sure that you give him good balance by placing him on his arms and elbows.

Take the two corners of the towel nearest his head and dry his face—behind the ears, inside the ears, across the forehead; then to the back of his head, around the side, drying the hair thoroughly; down the back to his toes and then down the sides from back to front as far as possible.

Now he is ready to be turned over for the finishing touches to be added. Pull the far side of the towel over the back of the baby, giving him support with your right hand on his head, neck and shoulders, and with the left hand pull the towel forward as the baby is rolled over. This will put him on his back and yet keep him completely covered. Take a corner of the towel and dry the folds under the arms and the lower parts.

It is a good plan to put the baby's diaper on first; then if an accident occurs, you are safe. The shirt is put on next, then the bootees, and now he is ready to be wrapped in his cotton blanket. A little protective pad can be placed in the blanket so that the baby cannot wet all the way through.

Starting early!

But it's never too early to "eat" your milk, too

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CLEANING BABY'S EYES, EARS AND NOSE

After the bath is a good time to clean the baby's eyes, ears and nose, but if he is hungry and restless, after the feeding is a much better time for this job. It is best not to try to clean these parts too thoroughly until the baby is about a month or 6 weeks old. Before this time, they do not need much attention; the baby usually sneezes to keep his nose clear, and he has hardly been in existence long enough for his ears to get dirty. It is not necessary at any time to clean the baby's eyes, ears or nose unless they appear dirty. The nose should always be cleaned gently; a doctor often advises the mother how to do this. In general, there are two ways to clean the nose. One is to take a bit of cotton, twisting it around a toothpick or a match, then moisten in oil and wash the baby's nose by turning the cotton in a rolling motion between your fingers. The other way is to dampen the corner of a washcloth, twist to make a small, pointed part to clean the nose. The same methods may be used in cleaning the ears.

The baby's eyes can be cleaned with a boric acid solution during the oil bath period, but after that time you may take a piece of cotton dipped in sterile water and wipe the eyes when necessary. As the tub bath becomes a habit, the washcloth can be used to wash the eyes, wiping from the inside corners outward.

CARE OF NAILS

The care of toenails and fingernails must be worked out by the mother. This care should be given at a time when the baby seems to be the calmest, which in many instances is after feeding.

The baby's nails are rather soft during the first month or six weeks of life, and care has to be taken that you do not bend them while trimming. Until he is about 2 months old, they need be cut only about once a week, or sometimes twice a week, but if the baby starts to grow rapidly, nail care every other day may be required. The nails are dangerous weapons, and when the baby cries or gets angry he is likely to dig into his face; often deep gashes are cut unless care is taken to prevent this from happening. During the first month, it is a wise plan to have the baby wear undershirts with the sleeves

Goes for Evenflo Hands and Feet

Mrs. A. L. O'Bryan, Louisville, Ky., says her 11-mo. old son "really does nurse by holding the Evenflo Nurser with his hands and feet." Looks like he wanted to be sure to get it. She says he has been using Evenflo since he was one month old.

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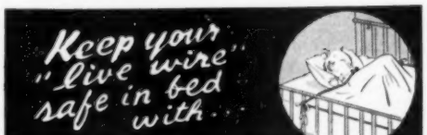

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sewed up; then there is no danger of the sharp nails harming him. But after that time you will have to watch and cut them according to how rapidly they grow.

NURSING THE BABY

Lucky is the mother who can and will nurse her child! Many mothers nowadays believe that nursing will ruin their figure. They are wrong. Nursing helps the mother as well as the baby. The baby seldom, if ever, refuses the mother's nipple if he is getting nourishment from her. If possible, the mother should lie down to nurse her baby until she has fully regained her strength. This will give her many minutes of needed rest. The mother should be as comfortable as possible when she starts sitting up to nurse her baby.

Before nursing, take a little piece of cotton dipped in sterile water and wash the breasts or nipples well.

Twenty minutes is the usual length of time to nurse the baby. Be sure to keep him awake, for if he should fall asleep he may become hungry before his next nursing period. A good way to keep him awake is to hold his hands and open and close his fists. Another method is to pat the bottoms of his feet. If he slows up, make a movement as though you were going to pull the nipple away; this will revive his interest and he will get a firmer grip on the nipple.

The breast-fed baby seems to have a better chance in life than the bottle-fed baby. While the mother is trying out this formula and that formula, the breast-fed baby goes right on without experimentation and thrives better than the bottle-fed baby, whose growth may be delayed until the right formula is found for him. Too, there is less work to nursing. You do not have to worry about fixing the formula every day, washing the dozen or more bottles, sterilizing them and heating the bottle to the right temperature before baby can satisfy his hunger. The breast-fed baby does not have to bother with a hard or worn nipple, cold milk or a too sweet or not sweet enough mixture. Breast milk is always the same temperature from the beginning of the nursing period to the time the baby stops. Every mother should make an effort to nurse her baby, and in most cases she can if she will stick to it long enough and

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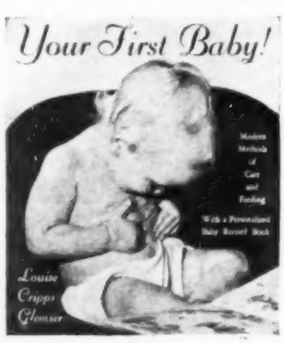

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make up her mind that she is going to do it. It is only fair to the baby to give him this start in life if it is possible.

SUNSHINE AND FRESH AIR

There is nothing more vital to the growth of a child than sunshine and fresh air. Deprive a child of fresh air and sunshine and he will grow pale, weak and sickly. There are ways of giving even the very young baby sunshine and fresh air baths.

When he is 1 month old, expose his body for only one minute—to sun that is not too hot. Gradually increase this time each day until you reach five minutes. When the baby is about 2 months old, the time can be increased to ten minutes; and at 3 months old, to fifteen minutes. Give him equal time on his stomach and back, but be sure that his head is covered and that his eyes are not in the sun. A deep box or basket is a good thing in which to give the young baby his sun bath; the high sides protect him from drafts and wind, and the upper part can be shaded so that the sun does not strike his face.

A good time to give the baby his sun bath is about an hour after his morning feeding. During this hour, he usually urinates and has a bowel action, so it is reasonably safe to leave him in the nude for his sunbath without the chance of an accident. After the sun bath, move him into the shade, dress him, and then let him lie and kick. He will soon become tired and perhaps take a nap in the open. Sometimes, he may sleep for an hour, after which you may offer him a drink of water. Then he can be taken indoors and amused until his 2 o'clock feeding, followed by another airing. Train him to take a little nap after this airing, give him water, and then let him play until the 6 o'clock feeding, after which he will sleep until his 10 o'clock feeding. If he seems to be wet at 10 o'clock, change him; if not, wait until after feeding to change his diaper.

THE DIAPER PROBLEM

The diaper situation does not get to be a problem until about the third month, when you have to start folding the diapers differently, since the baby has grown quite a bit now and his waste is greater. The oblong gauze diaper is ideal for the baby until he is about 3 months old. Knit diapers are all right for the baby before his third month, but after that they do not seem to be large enough, even though there is a larger size to buy.

Every mother has to work out her own diaper problem according to the needs of the baby. Many young mothers experiment until they find the right thing, then stick to it, but it is not long before they have to change, because the baby grows by leaps and bounds if he is properly taken care of. By the time the second child comes along, the mother will feel as though she could rear ten children with what she bought during the initiation of the first baby, when she knew little about babies and diapers.

When the baby is 3 months old, the flannelette diaper is really the thing to be used at night. It keeps the baby much warmer than the gauze does, and he can urinate more than once—being a large diaper, it stays warm next to the baby's body, whereas the gauze has a tendency to get cold and chill him. During the third month, gauze diapers can also be placed inside the flannelette diaper at night. Sometimes the baby will sleep through until his 2 a. m. feeding. With this thickness and absorption quality, there is less danger of the baby wetting through and soiling his bed and night clothes.

The baby oil used for bathing the baby in the early months of life can also be used in cleaning the after effects of a bowel movement. Take a small piece of cotton surfaced with the oil and clean his buttocks carefully. It is wise to wipe also after each urination with the oiled cotton; this will help to prevent a rash and keep the skin from becoming too dry. If diapers are not boiled and rinsed well each day, they may cause a rash.

Common sense will provide the answers to most of the problems of baby care. What agrees with one child may not agree with another. Every baby born is a little individual who has to be watched to determine what is good and what is bad for him. A mother must accept the fundamental rules for the care of a baby and mold them into his young life intelligently. Nine times out of ten, she will come out with a prize-winning specimen of the human race. We owe it to ourselves as well as to our offspring to give them a good start in life.

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57

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HEINZ Baby Foods

MIRACLES OF HEART SURGERY

(*Continued from page 799*)

forget that the chances were 99 to 1 against recovery if conventional methods of treatment were used.

The patient, a 29 year old stenographer, was steadily going downhill to almost certain death. Heart trouble, present since birth, had not greatly limited her activity. Then, somehow, she developed a streptococcus blood stream infection and the germs lodged in the abnormal ductus arteriosus. As the infection progressed, she became nervous and irritable, developed a high fever and lost weight.

After the faulty circulation had been corrected by tying a thread around the duct, conditions were no longer favorable for the growth of streptococci. Just before the operation, the blood teemed with these germs. Two days later the most careful laboratory studies failed to show any bacteria in the blood. The young lady left the hospital after four weeks, and she has been in excellent health ever since.

In the last three years, Touroff and other surgeons in this country and England have operated on 43 patients with subacute bacterial endarteritis. Twenty-eight of them have been completely cured. No wonder interest has been aroused in an operation which shifts the odds in favor of recovery from 1-99 to 4-2!

At the last meeting of the American Heart Association, Dr. Bernard S. Oppenheimer, professor of medicine at Columbia University, said, "A few years ago most physicians were not very enthusiastic about surgical treatment of heart disease. Since then [doctors agree that there are] two conditions in which operation seems to be indicated. One is patent ductus arteriosus and the other is chronic constrictive pericarditis."

Chronic constrictive pericarditis causes lingering disability and eventual death. Modern heart surgery can now promise a cure for these unfortunate victims. The heart itself is normal, but it is literally squeezed to death by scar tissue that grows around it. The scar is the result of a chronic infection, such as tuberculosis.

Cyanosis, or blueness of the skin, is the most noticeable symptom of chronic constrictive pericarditis. The pressure produced by the scar is so great that the veins cannot empty normally into the heart. They are overdistended with dark blue blood, giving the patient a bluish appearance.

Around the turn of the century, two people with this malady were successfully cured by operation. In those days of primitive surgery, the operative mortality was high. A few years ago, Dr. Claude S. Beck, professor of neurosurgery at Western Reserve University, revived interest in chronic pericarditis. He produced the disease in dogs, and then he tried to cure them. A procedure was finally developed for actually peeling the scar from the heart just as the outer coat is peeled from an onion.

One of Dr. Beck's first cases was a 7 year old boy. A year before, a sore throat had been followed by an infection in the pericardium. Since then, the boy had gradually developed the telltale signs of chronic constrictive pericarditis. A scar, one eighth of an inch thick, completely surrounded the heart. As the strangling bands of scar tissue were cut and the thick, leathery coat was removed, the heart swelled with new vigor. The youngster's color immediately improved and within a matter of hours, he felt better. He was soon able to leave the hospital—completely cured.

Altogether, nearly 200 of these operations have been performed by Dr. Beck and other surgeons. Almost half the patients have been cured and another quarter have been improved.

Dr. Beck's recent experiments in another sphere of cardiac surgery offer real hope that further miracles may become commonplace. By a new operation, he has been able to relieve the crushing breast pain of angina pectoris.

With advancing age and particularly in the presence of high blood pressure, the arteries of the heart may become encrusted with bony deposits much like the material that collects inside old boiler pipes. When this happens, these arteries—the coronary arteries—are not able to carry their normal supply of blood to the heart muscle. At times, one or more of them become completely plugged. Even then, the coronary arteries may carry enough blood to sustain the heart when it is at rest. Emotion or exercise increases the work of the heart, causing such a demand on the coronary circulation that the cardiac nerves cry out in protest. Terrifying attacks of heart pain result.

Every year, disease of the coronary arteries kills nearly 100,000 people in the United States. Several hundred thousand middle aged persons are more or less incapacitated by it. The first attack reduces the average period of life expectancy to one fourth of the normal.

As usual, Dr. Beck began his study of this disease with experiments on animals. He found that portions of chest muscle could actually be grafted onto the heart. The muscle covering the front of the chest is loosened at one end and gently sewed to the heart. The normal arteries of the muscle grow into the heart and nourish it.

Dr. Beck's first patient was a 48 year old farmer who could no longer work because the least effort caused excruciating heart pain. Four months after the operation, he was able to perform light work. He now considers himself cured.

Dr. Beck selected the most serious cases for surgery. They were persons whose condition was so desperate that ordinary medicines gave no relief. The majority were improved by the operation. If you could talk with some of them as I have, you would be convinced that the day of miracles is not past. His natural conservatism moves Dr. Beck to say that this work on angina pectoris is still in the experimental stage.

The field of cardiac surgery is unlimited. The war is providing a powerful stimulus for the development of improved technics. As time goes on, countless new miracles will save the lives and restore the health of civilians as well as soldiers.

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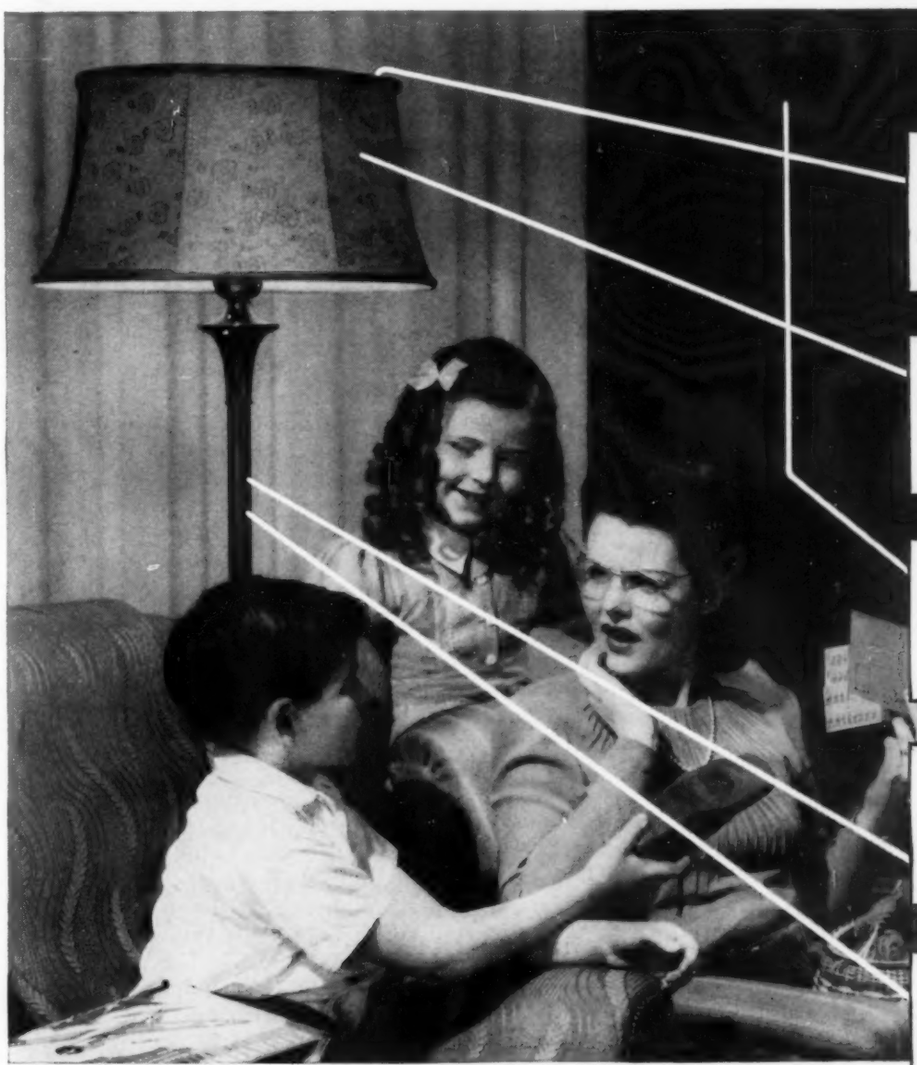

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An Eye for an Eye

(*Continued from page 801*)

tirely comfortable from an hour to an hour and a half, but the chemical composition of the fluid changes because of the secretions of the eye, and then the patient becomes uncomfortable and clouding appears.

Trouble also comes from air bubbles forming when the glasses are inserted. This can be most exasperating as every wearer of contact lenses knows. If a bubble forms, you have to take the lenses out and re-insert them. When bubble trouble persists, a correction will be made in the lenses.

After the first fitting the lenses are ground to your prescription. You have learned to insert them and remove them in ten minutes. It takes less than an hour to make the mold, and from now on the lenses are yours.

Gradually your eyes become accustomed to them, and the tolerance becomes greater. You can wear them from two to four or eight hours at a time. Many people are able to wear them for twelve hour periods. It is largely a psychologic matter, and individual tolerance differs.

Contact lenses are safe to wear and can be used for active sports. They cannot be broken while being worn unless forcibly struck with a pointed object. Though so very tiny and thin they are tough and resistant and safer than ordinary glasses.

They are not injurious to the eye, because the lens is so designed that it never comes into direct contact with the corneal portion of the eyeball. The fluid remains between the eye and the lens, so there can be no friction or irritation.

Contact lenses are not new. In the seventeenth century, aristocrats first looked through them on the terrors of the French Revolution. Royalists had glass blowers make them lenses with colored corneas—blue-eyed corneas for brown-eyed persons—purely as a disguise to save their necks from the guillotine.

Contact lenses were also widely used in the seventeenth and eighteenth centuries by royalty and the upper-crust of society to make their eyes appear larger and make themselves more attractive. (Human nature hasn't changed.) Amazing that any one would submit to such pain as these glass blown contact lenses must have caused.

During this period of development contact lenses were painful and poorly fitted. Glass blowers would make several hundred before they could get one which would approximately fit so that the patient could tolerate them. Also optics were poor because the lenses were of blown glass rather than ground with an optical surface.

But human ingenuity has few limitations. An idea or a thought once born is deathless. Shortly after the last war the Karl Zeiss company of Germany developed a technic of grinding optical surfaces on the corneal segment of contact lenses; and from this time forward the making of these lenses has been perfected.

Today they are made only by a few companies and laboratories. The reason for the scarcity of establishments making contact lenses is not the number of patients, as all the laboratories in the United States are overworked, but rather the lack of trained specialists who are able to fit and make these lenses.

I am now able to wear my contact lenses for about two hour periods. Gradually I expect to increase the time. Even my best friends don't know or tell me. No one suspects unless I say that I am wearing glasses. I continue to marvel at the great number of people of all ages, men and women, who are wearing them in perfect comfort. Also, there are many who are still trying to adjust themselves.

Contact lenses are still experimental, not in the sense of safety or injury to the eye, but in ability to wear them. There is still a chance that you might not be successful in wearing them, although the majority of people are able to do so.

Contact lenses are expensive. If the chance is worth their somewhat expensive cost to you, and it was to me and is to many others, go and see your doctor.

And soon you too may have an eye for an eye.

Simplifying Sex Knowledge

(**Continued from page 797**)

in itself. What *is* harmful is the terrible sense of guilt given to children who play with themselves by shocked parents, parents who exclaim, "For shame!" or "Naughty, naughty, musn't touch." Nor is masturbation freakish. Nearly all men and women, it's been estimated, have practiced it at some time in the course of their lives. *Expect* your tot to experiment with the newly-developing sensations of his body. If he is too persistent—which he probably won't be if you are *really* indifferent—divert his interest with play.

Finally, parents are afraid that children will talk, once enlightened. Actually, children who have had an overdose of enlightenment of the wrong kind are those most apt to parade their new knowledge. Answer all questions simply, matter-of-factly. You may cultivate, too, in your home a respect for the privacy of the individual. Not Victorian modesty. Just not intruding on each other's private worlds. Some mothers have found it helpful to explain that other mothers feel their children aren't old enough to hear all the facts, and ask their own offspring not to mention what's been told them. If this device is used, be sure to add, "Of course, other people have a right to their opinions, just as we have to ours."

Now for the questions children ask and the answers. The queries won't always be worded exactly like these, but they'll be similar. We've divided the questions into two general groups. The first, which follow, may be asked when a tot is only 3 or 4 years old. Here they are:

1. *Where do babies come from?*

Babies grow inside their mothers. To this basic answer you may want to add a few facts. The following questions and answers show how conversation on this subject might develop:

Babies grow in a little place just about here (the mother pats her middle) that's especially prepared for them.

In the mother's stomach?

No, in a place called the uterus, lower than the stomach. It's about 2 inches big, shaped something like a pear, and is 3 inches in from the outside of the body. There are strong bones protecting it, so it's a cosy place for the baby to grow, tucked away inside its mother for nine months.

Why nine months?

That is the length of time it takes for the baby's heart, lungs and other organs to grow. After that, the baby is strong enough to eat and breathe by itself, outside its mother. All animals grow inside their mothers like this. It takes a puppy only six weeks to grow, but it takes a baby elephant two years before it is ready to come into the world. You see, at the beginning the baby is just like a little egg. It's very tiny—not as big as this dot I've made with my pencil. This egg, or cell, divides into two, then four, and so on, but the cells stay strung together like the beads on your necklace. After two months this bit of living matter begins to have a head, arms, legs. It begins to look like a baby. That's the way all babies start. You did, too.

How did the baby get out?

When it is ready to come and live with father and you and me (or into the world) it goes down a passageway and out through an opening into sight. This is what we mean when we say a baby is born. Your birthday is the day you were born.

But isn't the baby too big to get out?

It's about the size of a doll when it's born. When it's inside its mother, it's curled up like a little kitten that's asleep. You remember, though, it is much tinier in the beginning. After it's been in its mother a month it looks like a little fish, so tiny it could fit on its mother's little fingernail. But as it gets bigger, the place where it lives—the uterus—gets bigger, too. It stretches. The same thing happens when the baby comes down the passage. That gets bigger, too. When the baby is out in the world, the uterus goes back to the size it was before the baby started to grow.

Does it hurt?

Yes, but mothers love their babies so they don't mind. (Don't say, "This is what I went through for you!")

2. *What makes babies start? Do babies have fathers?*

This question usually comes much later than the first. There is no need to discuss mating until the child begins to suspect that fathers might have something to do with babies. Here is the approved answer: Every living thing—a rose, an elephant, a lion, a baby—starts when two cells, one from the mother and one from the father, come together. A baby only begins to grow after a mother cell, or egg, has met a father cell, or sperm.

Yes, TUFFYS are the right nursers to use, these busy days. *Made of heat-resistant glass*, they're safe against sudden changes of temperature from refrigerator to boiling water. They're *guaranteed forever against thermal breakage*. They're lightweight—easy for baby to hold. And tough, to stand a lot of rough handling. Even with all these superior qualities, you can buy TUFFYS at 2 for only 25c.

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BROCKWAY GLASS COMPANY, INC., BROCKWAY, PA.
Makers of Sani-Glas Prescription Ware. Established 1907

RUTH: "But, Mother, nearly all the girls in my dorm are using Tampax now. It's not considered new any more; it's just a regular thing."

MOTHER: "*Well, I'll admit it has a lot of advantages, especially the quick changing, now that restrooms are so crowded. You say a doctor invented it?*"

RUTH: "Yes, and it has been adopted by millions of women all over the world—in Asia, Australia, Africa, Europe and the Americas. I'm really enthusiastic, you see!"

MOTHER: "*I give in! If it can cure a sensitive girl like you of self-consciousness and make you light-hearted at that time of the month, I'm for Tampax!*"

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You may elaborate on this theme with illustrations from nature. You might continue: If you could pull apart a primrose right at the place where the petals join the stem you'd see little bumps. This place is the ovary and the bumps are eggs. When the wind or an insect carries some pollen, which contains the father eggs to this flower, then the eggs and pollen may come together and a seed is born. A mother fish usually drops the eggs from her ovary into the water in a nice, quiet pool, and then a father fish drops his sperm right over the eggs. If an egg and sperm happen to meet, then a baby fish starts to grow.

You can see that many of the eggs of fish and flowers are wasted. Horses, dogs, lions, men—all four or two-legged beings—are made so the sperm and eggs won't be lost. The sperms of the father are passed directly into the mother. When the sperm is inside the mother, it swims through the uterus and enters a tube, called the Fallopian tube, where it meets the mother egg. As soon as a sperm has joined the egg a baby starts to grow. The egg then continues its journey down the tube, and in three or four days it reaches the uterus where the baby is to live. Meanwhile the walls of the uterus have been getting stronger and other changes have been taking place so the uterus will be ready for the baby. Everything is arranged, you see, so the baby will be snug and warm and have plenty of good food. The food the baby needs to grow is carried in the mother's blood stream, passing through a tube to the baby.

Older children will probably ask for more details concerning reproduction. There is, for them, fascinating scientific lore to draw on. Here is a possible conversation:

What do human spermatozoa look like?

They look something like the pollywogs you see in the pond. They have a head, a body and a tail. You can't see them, because they are so tiny. You know the smallest measurement on your ruler is ⅛ of an inch. Well, sperm are only 1/500th of an inch long.

How do you know what they look like?

A scientist can see one through an ordinary microscope.

How do they get into the mother?

They are released from the father in a liquid that looks a little like

milk, only it's thicker. They swim in this liquid by wriggling their tails fast, like this. (Wriggle your forefinger.) They're so tiny, though, they don't get far. They move ⅛ of an inch a minute. It takes them several minutes to pass through the uterus and into the Fallopian tube where they meet the ovum or mother egg.

Here are a few general admonitions:

Don't deliver a long lecture on sex at one sitting. We've mentioned before that the telling is a gradual process continuing over a period of years. We want to emphasize this point because so many mothers plunge into a long dissertation at the first opportunity, thereby betraying their uneasiness to their offspring. Your child's questions should be answered as they are asked; the questions reliably indicate the extent of his interest. If he feels free to question his parents, he will have asked, by the time he is of school age, about his anatomy and how babies are born. He should be given the correct terms for his anatomy. Before he is 10 years old, he should be told of the physical changes that take place at puberty.

Don't worry if your child is curious. That's normal. Worry if he *isn't*. The child who doesn't ask questions has somehow received the impression that he shouldn't. This unfortunate reticence may be overcome by providing pets for the child, or by studying flowers with him. Don't think, however, that, having explained how violets or kittens are born, your task is done. As Heywood Broun once put it, in discussing the birds-and-bees technic of telling, "The trouble with this kind of instruction was that I was neither a bird nor a flower!" The new baby next door may provide inspiration for a conversation that will enlighten your child. Statues and drawings, in which the nude figure is beautifully delineated—minus the fig leaves—constitute another excellent approach to the subject.

Don't shuttle the child who asks a question to another parent, a doctor, nurse, or friend.

Don't leave books around hoping your child will read them. He will, but he'll carry off besides the book a sense of secrecy and guilt.

Don't be too academic. Descend, occasionally, to street level. Casually let Tommy know you're quite familiar with the words "the fellows use."

Finally, and this is most important, *examine your own attitude.* Don't think that, by dutifully teaching Josephine to call her fanny "buttocks," you have made her a good girl. Unless you honestly feel natural about the whole subject, your hidden shame or uneasiness will penetrate to your child's consciousness. Do you raise your eyebrows when your tot plays with itself? Do you snigger, in that peculiar, sex-conscious way that grownups have, when he asks an intimate question? Do you exclaim, "*I* never asked such questions when I was small"? If you answer "Yes" to any or all these questions, then it's time you get rid of the feeling that sex is "not nice." Go to the library and read a few books on sex education—not to memorize what's in them but just to get the feel of the subject, to become at ease with it. Such reading will help you realize, too, that your child's questions aren't so shocking. Other youngsters have asked questions a lot worse.

Don't try to be sacred about sex. Remember that the deep psychic and emotional significance of sex is *in your mind,* not in your child's. His reaction to too much piousness is classically summed up in this line, "Methinks the lady doth protest too much!" Don't, on the other hand, be too stark. There's the story of the precocious brat who, after asking if God had brought her, her mother and her grandmother, demanded, "Do you mean to say there have been no normal sex relations in this family for two hundred years?"

There is a new and unabashed consciousness of romance in the land today—a sense, made more thrilling and beautiful through our knowledge of science, of the continuing character of life, of the hidden significance of every little thing. Something of your own wonder, of how all living things change yet life goes on, may be inculcated in your child, conveying to him that sex, while it is natural, is a precious and a mighty thing. That awareness, together with a normal, harmonious environment, will be your greatest guarantee of Junior's future happiness.

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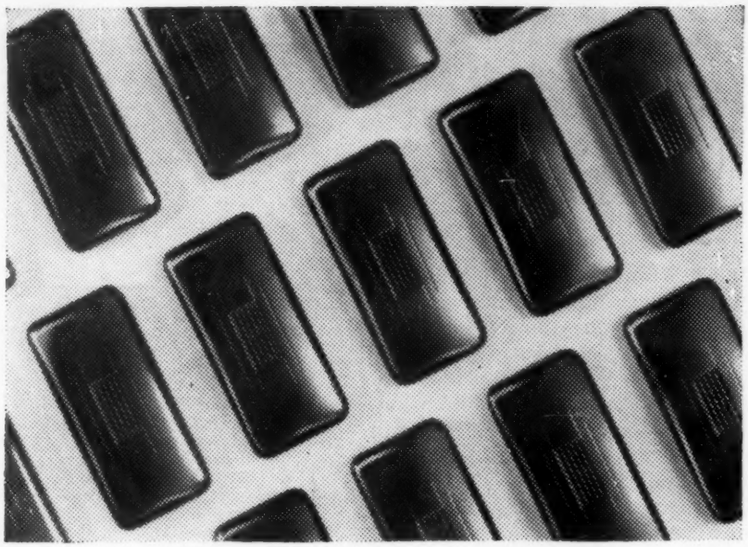

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And the Deaf Hear!

(Continued from page 803)

and naturally within the scope of hearing aid ability. Deny the presence of a handicap. Admit the existence of an impairment. Then adjust to it intelligently, patiently, happily—*and you will hear usefully!*

Adjustment to silence during the hours the aid is not worn is also necessary, and the time can be utilized profitably in reading, writing, sewing, cooking, or doing any number of creative things for which silence is an aid to accomplishment. Keeping busy and happy and remembering that there are countless others "in the same boat" and that one who can hear with an instrument is better off than one who cannot, will make for quicker and more successful adjustment.

Those who have unimpaired hearing can assist immeasurably in the rehabilitation of the deafened by helping them to keep faith and confidence in themselves and others. They should refrain from making any utterances in the presence of the hard of hearing that they would not make if those persons were able to hear normally. Such thoughtless experiences cause the deaf to become suspicious and retard their progress in the work of overcoming those strange complexes to which they sometimes fall victim during the process of the loss and regaining of sound and understanding.

Orientation in an existence of partial hearing comes about happily when interests are kept wide and not concentrated because of the feeling of limitation, weakness and inferiority. For example, enjoyment of sports prior to defective hearing should be continued as far as possible.

Finally, let us remember that being deprived of normal hearing does not mean prohibitive handicap. It does mean adjustment and rehabilitation, processes that have been made easier by ingenious scientific research and invention, the success of which depends largely, if not entirely, on the cooperation of hearing aid users. Keeping mentally alert, utilizing silence as well as sound and being patient at all times are the essential factors in successfully meeting the problems that face those with impaired hearing.

Common Colds

(Continued from page 795)

vations suggested that sudden chilling of the body may bring on an attack in a person who has had a recent infection or a recent contact, but only if such a condition accompanied the chilling. That chilling may predispose to colds in isolated groups, however, would seem to receive some support from the following observations of Paul. Outbreaks of colds were noted on board the ship *Carnegie* when it entered a cold current from warmer waters, even though it had been out of port for days or weeks. This suggests that exposure to cold may in some way activate the virus in a group after it has failed to produce infection for many days or weeks preceding the outbreak.

Methods of preventing colds have been directed along several lines. It can be said at once that none of them are effective. Since it is as yet impossible to prevent the spread of the virus in the community, attempts have been made to increase the resistance of the individual. Within recent years, vaccines, vitamins and "hardening processes" have been investigated. These deserve individual comment.

Cold Vaccines.—In attempting to reduce the number of colds in susceptible persons, vaccines containing a wide variety of micro-organisms commonly found in the respiratory tract have been used. Since the common cold is due to a filterable virus and the organisms included in the vaccines are now believed to be of secondary importance, it is not surprising that these vaccines, whether given by mouth or by injection, have been a great disappointment. In spite of the many supporters of this method of prophylaxis, it is generally agreed among physicians that the incidence of colds is no less following the use of vaccines than in groups of nonvaccinated persons, and there is good evidence that these vaccines may produce little or no protection against other diseases of the upper respiratory passages.

Since so-called cold vaccines are still widely used, it is well to review the evidence upon which the above statements are based. To Drs. H. S. Diehl, A. B. Baker and D. W. Cowan belongs the credit for clarifying the position of cold vaccines. In two reports, one appearing in 1938 and the other in 1940, the following results were recorded. In 1938, it was found that in a group receiving one vaccine by mouth, the incidence of colds was the same in the vaccinated as in the control group, and the same was true when another type of vaccine was used. In a third group receiving vaccine subcutaneously, there were 25 per cent fewer colds per person than in the control group. This difference was noted during both years of the study and was considered statistically significant.

THE DIAGNOSTIC LAYMAN

Some folks believe implicitly,
And some are just agnostic.
Some listen with simplicity,
But I am diagnostic.

I tell the doctors what is wrong.
They listen with indulgence,
And try to coddle me along.
(I know they're not such dull gents.)

But after all, the pain is mine,
And I know where I feel it.
And conversation is my line,
I've never yet concealed it.

I really will talk less and less
And listen more intently.
I'll be polite, nod yes, yes, yes!
Act less impertinently.

But, Doctor, don't you really think—
Oh, there I go once more.
Of course he thinks! Good Lord, he's gone!
And did he slam the door!

—*Jean Allan.*

Inasmuch as the virus of the common cold promotes the growth of micro-organisms in the respiratory passages, it might be hoped that vaccines made from these organisms would reduce the number of complications. Experiments designed to shed light on this question have been carried out by Dochez and his associates and by Diehl, Cowan and Baker. The results have not been very encouraging. The former investigators studied a group of 20 infants in an institution and gave vaccine at weekly intervals over a period of months. Nine injections were given in the autumn and a similar number in February and March. Another group of infants of the same age and living under the same conditions were observed as controls. The results of this carefully controlled study were of great interest. There was no reduction in the number of simple colds or of respiratory infections associated with fever in the vaccinated when compared with the nonvaccinated group. There was, however, an apparent reduction in the severity of the infections as judged by the duration of the fever, which was shorter by 40 per cent in the vaccinated than in the nonvaccinated. There were five cases of pneumonia among the nonvaccinated group and one case in the vaccinated group. Dochez and his co-workers concluded that the protection against respiratory complications with fever was incomplete, and that the technic of carrying out such immunization was so time-consuming and burdensome that this method did not seem promising for general use.

Drs. Diehl, Cowan and Baker were unable to find any difference in the incidence of complications in the vaccinated and the nonvaccinated groups. The slight difference in the two groups may have been due to the difference in ages and in environment. One group lived in an institution; the other was comprised of students in a university.

On the whole, then, one can say without fear of contradiction that the results obtained from cold vaccines have been disappointing. The vaccines have failed to prevent colds, and they have failed to lessen the number of complications except when given repeatedly over a long period of time.

Vitamins.—Deficiency states, in which the body suffers from lack of some specific food element, often predispose to infections, but the supplying of extra vitamins and other food elements to the person who shows no signs of deficiency disease does not protect him against respiratory infections, including colds. Carefully controlled studies have been made recently by Cowan, Diehl and Baker and by Dr. A. G. Kuttner. The evidence is good that large doses of vitamins A, B_1, B_2, C and D and nicotinic acid, or vitamin C alone, have no significant effect on either the number or severity of upper respiratory infections when administered to young adults who are on a reasonably

adequate diet. Besides these observations, other investigators were able to show that large doses of vitamins A and D failed to prevent complications in established hemolytic streptococcal infections of the throat. Experiments such as those carried out at the University of Minnesota are of the highest importance, since here was a group of investigators sincerely interested in methods of preventing and treating colds, who have devoted a number of years of study to this most important problem. They understand the significance of a controlled experiment. A careful study of their data leaves no doubt in the minds of the most critical observers that vitamin therapy in the group studied by them was of no value so far as either the number or severity of colds was concerned. There is no reason to believe that their experience is unique.

Hardening Processes.—A number of procedures have been recommended from time to time which have as their objective the conditioning of the body to sudden changes in external temperatures of the skin, such as cold shower baths every morning and exercise out of doors followed by hot and cold shower baths. Controlled experiments on this subject have been carried out by Dr. W. M. Gafafer, who was unable to show any lower incidence of colds in people who followed these practices when compared with a group who did not.

To sum up, it can be stated that vaccines containing the ordinary organisms found in the nose and throat are of no practical value in the prevention of colds. There is no conclusive evidence that they even shorten the course of a cold or prevent the development of secondary infections. It is also true that vitamins fail to prevent colds, at least in a group of cold-susceptible people. To date, all other measures have failed to influence the frequency of colds, and we are forced to the unhappy conclusion that at present there are no effective methods available for the prevention of the common cold. Personal hygienic measures and the avoidance of excessive chilling and sudden changes in temperature, especially at a time of year when colds are prevalent, may aid in reducing the total number of colds in some individuals. Avoidance of exposure to colds is important but not always practicable. Every effort should be made to practice hygienic measures, such as washing of the hands before meals and avoidance of direct contact with persons with colds. Once colds have developed, relief can be obtained by rest, from sedatives and through symptomatic treatment. Undue risks should not be taken, since colds are often followed by pneumonia and other serious respiratory illness.

INFLUENZA

Clinical influenza occurs as a sporadic, epidemic, or pandemic infection. The sporadic and epidemic forms which have occurred in this country and elsewhere within the last few years are due in many instances to a filterable virus designated as Influenza Type A and Type B, respectively. Whether or not the disease which occurred in 1918 was due to the same virus is not known. There seems little reason to doubt, however, that it was due to a virus infection. Of all the epidemic respiratory infections, influenza is perhaps the most important, since it can virtually paralyze the activity of civilian and military units. It not only causes great loss of time from work but, since it predisposes its victims to pneumonia, it is also responsible for many deaths.

Within recent years, great advances have been made. We now know that some forms of influenza are caused by a filterable virus which can be isolated and used as a vaccine. We also know that there are available both antipneumococcic serums and sulfonamide drugs for the treatment of pneumonia, which is so often a complication of influenza. While the sulfonamides have no demonstrable effect on the influenzal infection, they are powerful agents in the treatment of pneumonia and there is some evidence that they may aid in its prevention.

In an attempt to prevent influenza, three lines of investigation have been prosecuted: the use of vaccines, the control of air-borne infection by means of ultraviolet irradiation of air and the use of propylene glycol vapor, and the use of immune serum.

Vaccines.—As soon as a virus was isolated from cases of influenza, attempts were made to develop a vaccine which would produce protection against infection. It was soon found that neutralizing and protective antibodies could be produced in animals vaccinated with the virus. A wide variety of vaccines have been used in man to stimulate antibodies and protect patients against attacks of influenza. Vaccines made of influenza virus call forth an antibody response in the recipients, but they do not completely protect against attacks of influenza. The evidence is good that the incidence of the disease is reduced in some groups and the duration of the disease is shortened.

Aside from increasing individual resistance to infection, attempts have been made to prevent the spread of the influenza virus and other infective agents by means of ultraviolet irradiation of air and use of propylene glycol vapor sprays. It was first demonstrated by Dr. O. H. Robertson and his associates that the vapor of propylene glycol, even in a dilution of 1 to 50,000,000, was effective in destroying air-borne bacteria and the human influenza virus A. Others have recently reported their results with the effect of this vapor on the incidence of respiratory infections in a convalescent home for children and in the prevention of air-borne infection of mice by influenza A virus. These preliminary observations leave no doubt in any one's mind that this vapor is an effective means of sterilizing or reducing the bacterial counts in the air of hospital wards. They are also indicative of the great potential value of this method in the prevention of cross-infection, especially when persons live in close contact with one another indoors. When the effect of ultraviolet irradiation was compared with that of propylene glycol vapor it was demonstrated that they were almost equally effective in the prevention of air-borne infection of mice by influenza A virus. These experiments suggest that both ultraviolet light radiation and propylene glycol vapor spray are agents which deserve extended trial in the prevention of the spread of respiratory infections.

Immune Serum.—The use of immune serum locally in the nasal passages has also been explored. Stokes and Henle have reported

encouraging preliminary results with this method in experimental animals, indicating that it deserves a trial in man.

PNEUMONIA

Great strides have been made in the treatment of pneumonia, but very little has been accomplished in its prevention. It is now acknowledged that the death rate from pneumonia has decreased considerably since the introduction of sulfapyridine in 1937. This decline has occurred in spite of the fact that there has been no decrease in the incidence of the disease. Concurrent with a reduction in the death rate, there has occurred as a result of modern treatment a decrease in the total number of days of illness. For example, investigators for the Equitable Life Assurance Society of the United States, in commenting on the economic aspects of pneumonia with reference to the prevalence and duration of illness in the years before and since the development of the sulfonamides, have pointed out the following facts. When the incidence of pneumonia in the three years preceding the use of the sulfonamides was compared with its incidence in 1939, 1940 and 1941, it was clear that there was no decrease; indeed there appeared to have been an increase. Secondly, the duration of illness has been greatly reduced; that is to say, the average period away from work in 1941 was 35 days, compared with 45 days in 1935. The most frequent duration of illness in 1941 was 27 days, compared with 38 days in 1935. The experience of others is in agreement with these findings.

There seems to be no doubt, then, that with modern methods of treatment the total number of days lost from work in patients who develop pneumonia can be greatly reduced. In the aggregate this results in great economic savings to industries, employees and insurance companies.

Prevention.—What can be done about the prevention of pneumonia? It has already been stated that very little has been accomplished in this direction, and the disease continues to remain a major factor in loss to industry through illness. In any discussion of the prevention of a disease, it is well to ask how it is acquired and what factors predispose to its development. While all the factors of susceptibility to pneumonia are not clearly understood, a number of advances have been made recently in the study of pneumococcal infections. In these studies it is stated that both carriers and active cases of pneumonia serve as foci for the spread of the disease, carriers being more important than cases. Also, it is asserted that the occurrence of pneumococcal infection is dependent on the individual's susceptibility to the particular strain of pneumococcus with which he comes in contact. While all aspects of this underlying susceptibility are not understood, it is recognized that the following features are important: excessive fatigue from overwork and inadequate rest; excessive chilling following exposure to cold or wet; sudden chilling when overheated; the presence of other infections such as colds, influenza and bronchitis; and acute or chronic alcoholism. To these, of course, should be added the extent and intimacy of contacts with cases or carriers. The spread of pneumococci is greatest within families, in barracks, or in open dormitories where the chance for intimate and repeated contacts is possible.

RECOMMENDATIONS FOR CONTROL

What specific recommendations can be made for the control of the spread of pneumonia and pneumococcal infections in general? A few of the chief points may be enumerated:

(1) Education of the medical profession and public concerning the dangers of the spread of pneumonia by contact with cases of pneumococcal infection in the home or elsewhere.

(2) The isolation of all active cases.

(3) The adequate medical care of colds and bronchitis.

(4) The destruction of all discharges from the nose and throat.

(5) The early recognition, reporting and isolation of the infective agent.

(6) The prompt and effective use of chemotherapeutic agents.

(7) The avoidance of overcrowding.

Predisposing factors leading to the spread of pneumonia in industries must be studied carefully with an attempt to eliminate each one as far as possible.

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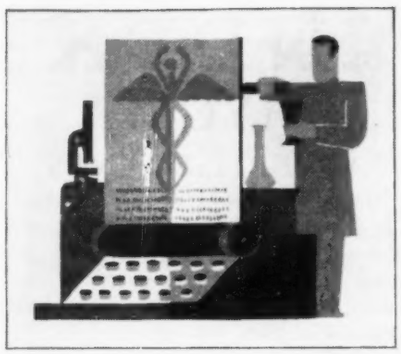

MEDICAL NEWS OF THE MONTH

Motor Unfitness

From a study of the motor fitness, involving the capacity to run, jump, dodge, fall, climb, swim, ride, lift and carry loads and endure long hours of continuous work, of young men at the University of Illinois, Thomas K. Cureton, Urbana, Ill., reports in a recent issue of *The Journal of the American Medical Association* that "the proportions of motor unfitness among young men are appalling. . . . Physical training programs are not compensating rapidly enough for urbanization with its associated mechanization, indoor work, dependence on motor vehicles and lack of the necessity of hard physical work in youth. Large numbers of young men are entering adult life unconditioned and unmotivated to maintain physical fitness. This trend may contribute greatly to high accident rates, rapid loss of health after the age of 30 and widespread chronic disease because of the lack of preventive hygiene and conditioning work of the body.

"Physical education and recreational programs have been inadequate, possibly because of inadequate time, facilities and leadership. In addition, the programs too infrequently focus on the physical fitness objective in terms of big muscle and organic endurance criteria. The socialization of the programs has possibly hurt the conditioning value of the activities. Many activities, such as bowling, dancing, socialized games, archery, bait and fly casting, badminton and tennis, possibly contribute very little as they are taught in typical physical education or recreation classes. . . ."

It was found that 60 per cent of those failing to pass the motor fitness test at the University could not swim 100 yards. It is pointed out that thousands of drownings in the war are directly attributable to inability to swim.

Infantile Paralysis

Electrical tests of muscles of both patients with infantile paralysis and those without the disease, conducted in two separate investigations, have led to reports in recent issues of *The Journal of the American Medical Association* that the concepts of muscle involvement in infantile paralysis advanced by Elizabeth Kenny, the Australian nurse, although the basis of an excellent type of treatment, are inadequate as a physiologic explanation of the muscle dysfunction present in victims of the disease. One report was made by Joseph Moldaver, New York, and the other by Arthur L. Watkins and Mary A. B. Brazier, Boston, and Lieutenant Commander Robert S. Schwab (MC), U.S.N.R.

Transfuses with Own Blood

The regular London, England, correspondent of *The Journal of the American Medical Association* tells in a recent issue of the heroism of an English medical officer, the first British paratroop doctor to win the military cross. When the doctor dropped by parachute in Tunisia he broke his leg. Nevertheless he carried on and when the blood transfusion supplies gave out he took a pint of his own blood for a patient.

Diarrhea of the Newborn

Neonatal diarrhea (of the newborn) has been treated successfully with succinylsulfathiazole, a sulfonamide drug, according to a report in a recent issue of *The Journal of the American Medical Association* by Allan H. Twyman and George R. Horton, Indianapolis.

Controlling Epidemic of Scarlet Fever

Sulfadiazine in prophylactic doses of 1 Gm. daily effectively controlled an epidemic of scarlet fever at a United States naval station and caused a pronounced reduction in the number of daily sick calls due to other respiratory complaints, Lieut. Robert F. Watson (MC), U.S.N.R.; Lieut. Comdr. Francis F. Schwentker (MC), U.S.N.R.; Comdr. J. E. Fetherston (MC), U.S.N., Ret., and Sidney Rothbard, New York, report in *The Journal of the American Medical Association.*

The authors say that the first case of scarlet fever to appear at the naval station where their study was made was on Sept. 28, 1942. During the following month only a few additional cases were reported, the number being about equally distributed between the radio school and the regular personnel. During the first two weeks in November, however, the incidence of scarlet fever increased sharply in both groups and by November 20 the number of cases in the radio school had reached a level of 10 a week, with a slightly higher incidence among the regular personnel. On November 20, as a prophylactic measure, the entire personnel of the radio school was started on 0.5 Gm. of sulfadiazine twice a day. The drug was given at 8 a. m. and 4 p. m. and was continued for a period of thirty-two days.

"The results were striking," the four physicians declare. "During the first week after sulfadiazine was started the incidence dropped to 4 cases a week, during the next three weeks only 5 new cases of scarlet fever appeared among this group. . . ."

Epidemic Keratoconjunctivitis

Effective use of a solution of sodium sulfathiazole containing desoxyephedrine in the treatment of epidemic keratoconjunctivitis, the new eye disease, is reported in a recent issue of *The Journal of the American Medical Association* by H. S. Gradle, Chicago, and G. H. Harrison, Waukegan, Ill.

The authors say that the new medication is harmless to the tissues of the eye, and reduces the time of the acute aspect of the disease to three to seven days. The solution is used as eye drops. In the 50 cases reported by them treatment was continued for several weeks.